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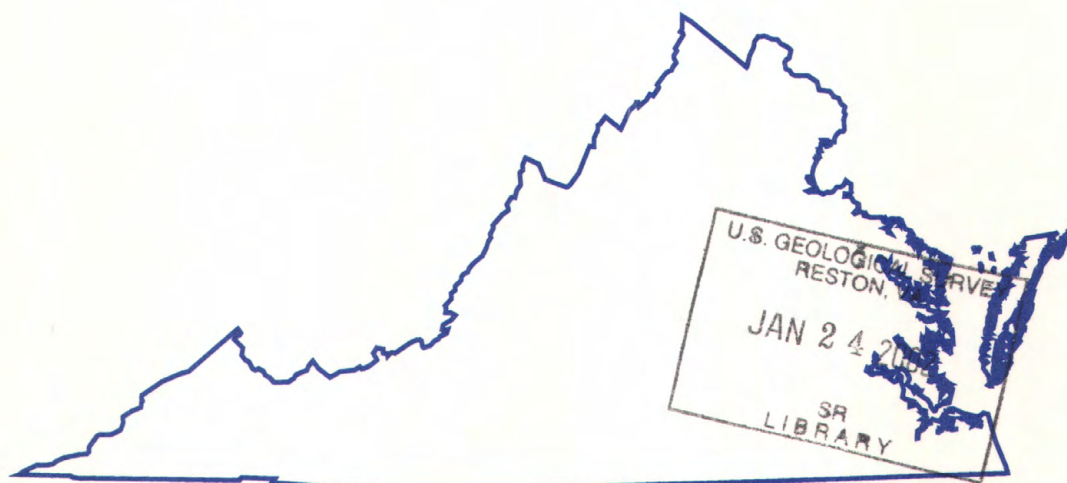
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# Water Resources Data Virginia Water Year 2001

## Volume 2. Ground-Water Level and Ground-Water Quality Records

Water-Data Report VA-01-2

REFERENCE



# CALENDAR FOR WATER YEAR 2001

2000

OCTOBER							NOVEMBER							DECEMBER						
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2001

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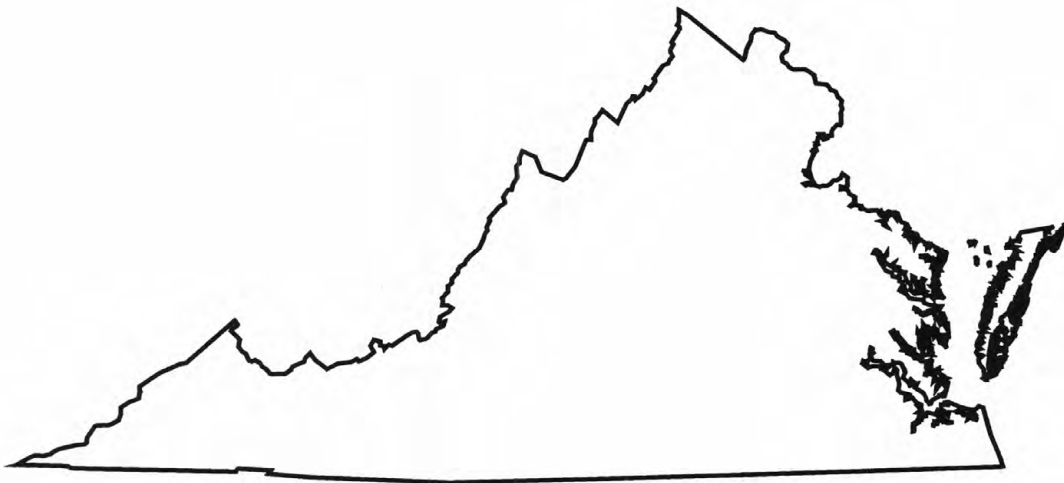
U.S. Department of the Interior  
U.S. Geological Survey

# Water Resources Data Virginia Water Year 2001

## Volume 2. Ground-Water Level and Ground-Water Quality Records

By Roger K. White, Eugene D. Powell, and Patsy Francisco

Water-Data Report VA-01-2



Prepared in cooperation with the  
Virginia Department of Environmental Quality and with other agencies



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Charlottesville, Virginia 22903

2001



## PREFACE

This volume of the annual hydrologic data report of Virginia is one of a series of annual reports that document hydrologic data gathered from the U.S. Geological Survey's and cooperating agencies' surface- and ground-water data-collection networks in each State, Puerto Rico, and the Trust Territories. These records of streamflow, ground-water levels, and water quality provide the hydrologic information needed by State, local, and Federal agencies, and the private sector for developing and managing our Nation's land and water resources. Hydrologic data for Virginia are contained in two volumes:

Volume 1. Surface-Water-Discharge and Surface-Water-Quality Records

Volume 2. Ground-Water-Level and Ground-Water-Quality Records

This report (Volume 2) is the culmination of a concerted effort by dedicated personnel of the U.S. Geological Survey and the Virginia Department of Environmental Quality who collected, compiled, analyzed, verified, and organized the data, and who typed, edited, and assembled the report. In addition to the authors, who had primary responsibility for assuring that the information contained herein is accurate, complete, and adheres to Geological Survey policy and established guidelines, the following personnel contributed significantly to the collection, computation, processing, and completion of this information:

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# WATER RESOURCES DATA - VIRGINIA, 2001

## VOLUME 2. GROUND-WATER-LEVEL AND GROUND-WATER-QUALITY RECORDS

### INTRODUCTION

The Water Resources Division of the U.S. Geological Survey, in cooperation with State agencies, obtains a large amount of data pertaining to the water resources of Virginia each water year. These data, accumulated during many water years, constitute a valuable data base for developing an improved understanding of the water resources of the State. To make these data readily available to interested parties outside the Geological Survey, the data are published annually in this report series entitled "Water Resources Data - Virginia."

This series of annual reports for Virginia began with the 1961 water year with a report that contained only data relating to the quantities of surface water. For the 1964 water year, a similar report was introduced that contained only data relating to water quality. Beginning with the 1975 water year, the report format was changed to present, in one volume, data on quantities of surface water, quality of surface and ground water, and ground-water levels. Beginning with the 1990 water year, the quantity of data to be published made it necessary to present the data in two volumes; Volume 1 encompassed surface-water-discharge and surface-water-quality records and Volume 2 encompassed ground-water-level and ground-water-quality records.

This report is Volume 2 in our 2001 series and includes records of water levels and water quality of ground-water wells. It contains records for water levels at 267 observation wells and water quality at 62 wells. Locations of these wells are shown on figures 4, 5, 6, and 7. The data in this report represent that part of the National Water Data System collected by the U.S. Geological Survey and cooperating State and Federal agencies in Virginia.

Prior to introduction of this series and for several water years concurrent with it, water-resources data for Virginia were published in U.S. Geological Survey Water-Supply Papers. Data on water levels for the 1935 through 1974 water years were published under the title "Ground-Water Levels in the United States." These Water-Supply Papers may be consulted in the libraries of the principal cities of the United States and may be purchased from U.S. Geological Survey, Branch of Information Services, Federal Center, Bldg. 41, Box 25286, Denver, CO 80225.

Publications similar to this report are published annually by the Geological Survey for all States. These official Survey reports have an identification number consisting of the two-letter State abbreviation, the last two digits of the water year, and the volume number. For example, this volume is identified as "U.S. Geological Survey Water-Data Report VA-00-2." For archiving and general distribution, the reports for 1971-74 water years also are identified as water-data reports. These water-data reports are for sale in paper copy or in microfiche by the National Technical Information Service, U.S. Department of Commerce, Springfield, Virginia 22161.

Additional information, including current prices, for ordering specific reports may be obtained from the District Office at the address given on the back of the title page or by telephone (804) 261-2600.

Water resources data, including those provided in water data reports, are available through the World Wide Web on the Internet. The Universal Resource Location (URL) to the Virginia District's home page is:

<http://va.water.usgs.gov>

### COOPERATION

The U.S. Geological Survey and agencies of the State of Virginia have had joint-funding agreements for the collection of water-resource records since 1930. Organizations that assisted in collecting the data in this report through joint-funding agreements with the Survey are:

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY, Dennis H. Treacy, Executive Director.

CITY OF NEWPORT NEWS, Brian Ramaley, Director, Department of Public Utilities.

HAMPTON ROADS PLANNING DISTRICT COMMISSION, Arthur L. Collins, Executive Director.

Organizations that provided data are acknowledged in station descriptions.

## WATER RESOURCES DATA - VIRGINIA, 2001

## RECORDS COLLECTED BY THE STATE OF VIRGINIA

In addition to data collected by the U.S. Geological Survey, there are included herein records for 183 observation wells operated by the Virginia Department of Environmental Quality. These records are published as provided and are acknowledged in the "REMARKS" paragraph of each individual well. The Virginia Department of Environmental Quality is under the direction of Dennis H. Treacy, executive director. Published material for the ground-water wells is supplied through the Division of Water Program Coordination, Larry G. Lawson, P.E., director.

## SUMMARY OF HYDROLOGIC CONDITIONS

Hydrologic conditions during the 2001 water year are summarized on the basis of water levels in a network of 13 index observation wells across Virginia. These wells have been selected to represent general hydrologic conditions across the State. Water levels in other observation wells documented in this report, however, can differ from those in nearby index wells because of local differences in hydrologic conditions. Water levels in 11 index wells reflect the response of ground-water levels in the water-table aquifer to natural processes and possibly to human activities. Water levels in the two other index wells reflect changes in ground-water levels that result primarily from pumpage from confined aquifers of the Coastal Plain of Virginia. The locations of the index wells and other observation wells documented in this report are shown in figures 4 through 7.

## Water-Table Aquifer

The water-table aquifer is the shallowest aquifer in Virginia and is present throughout the State. It is formed in different geologic materials at different locations. Water levels in this aquifer typically reflect the effects of natural processes and human activities. The principal natural processes include recharge by precipitation across the land surface and discharge in low areas to seeps, springs, wetlands, lakes, and streams. Where ground-water levels are near the plant root zone, discharge is also by evapotranspiration. The principal human activities include withdrawals by pumpage and changes to land surface that affect rates of recharge and discharge. The index wells used for describing hydrologic conditions in the water-table aquifer generally are in areas that are not thought to be affected by pumpage.

Ground-water levels rise when rates of recharge exceed rates of discharge. Recharge is affected by rates and amounts of precipitation and conditions near land surface that affect the infiltration of water into the soil and subsequent percolation of water to the water table. Ground-water levels decline when rates of discharge from the water-table aquifer exceed rates of recharge. Ground water naturally discharges throughout the year; rates of discharge change seasonally, however, depending on hydrologic conditions. In Virginia, discharge by evapotranspiration is low from late fall to early spring and increases through the spring to seasonal highs in the summer. When evapotranspiration is high, soil moisture can become depleted. The resulting dry soil typically retains much of the precipitation that falls during these periods, thereby limiting recharge to the water-table aquifer. Consequently, water levels in the water-table aquifer in Virginia typically are highest in late winter or early spring and lowest from late summer to early winter.

During the 2001 water year, water levels generally reflected the dry conditions that have persisted throughout much of the State since the summer of 1998 (fig. 1). Generally, the summer of 1998 and the 1999 water year were substantially drier than normal. Although precipitation during the 2000 and 2001 water years was only slightly below normal, recharge to the ground water was limited by the temporal distribution of precipitation throughout much of the State. In general, the principal recharge periods in the late winter and early spring were drier than normal, thereby limiting the amount of recharge. During the rest of the period, precipitation seldom was of sufficient magnitude to create appreciable recharge.

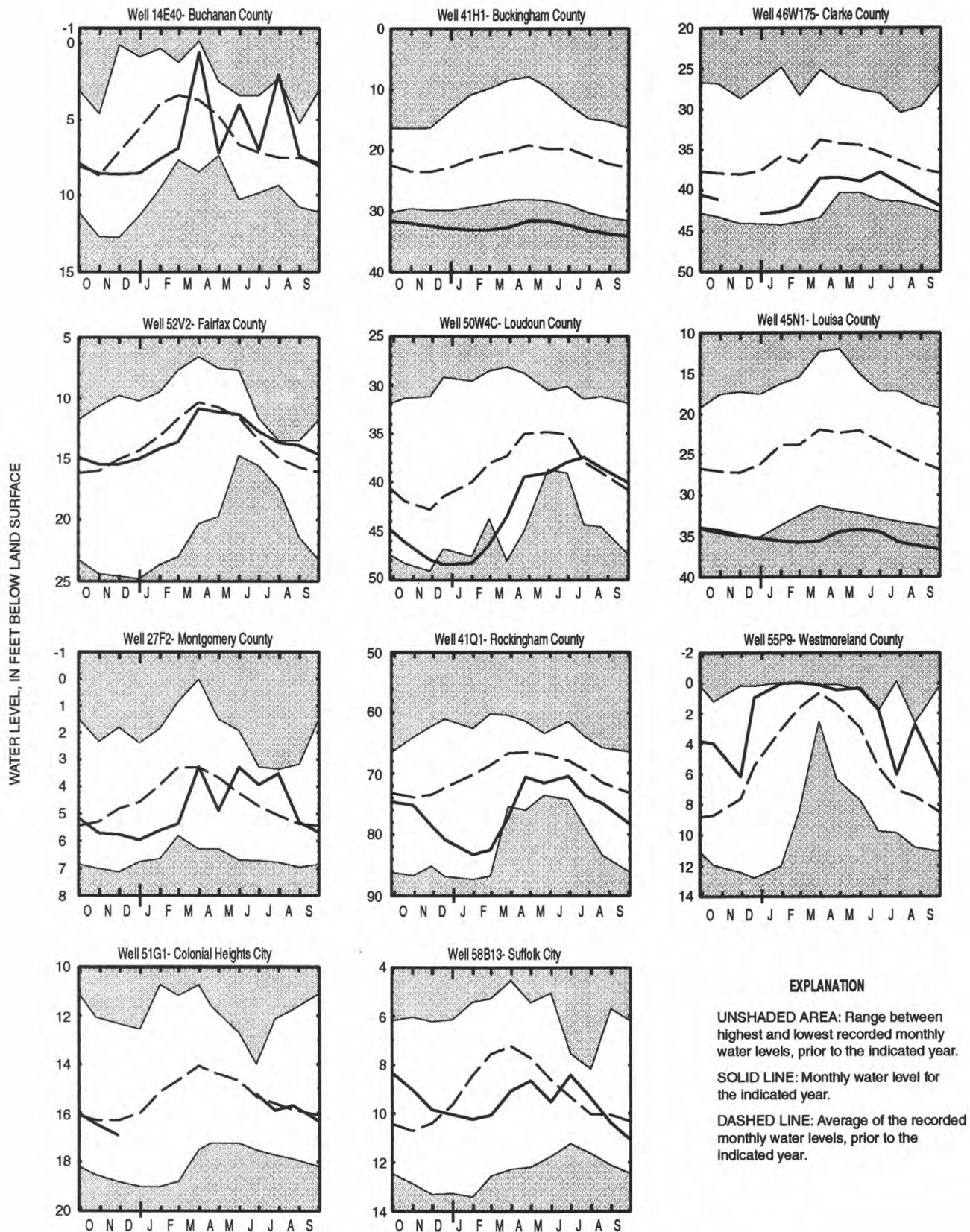
Deviations from average monthly water levels varied by region. Water levels in the eastern part of the State (index wells 51G1 in the City of Colonial Heights, 58B13 in the City of Suffolk, and 55P9 in Westmoreland County) generally were near or higher than average levels. Well 55P9 was the only index well in which water levels consistently were above average; levels were near the record monthly high levels throughout much of the middle of the year. Similarly, water levels were near or above average throughout the year in index well 52V2 in Fairfax County in northern Virginia.

In the southern and southwestern parts of the State, water levels in index wells 27F2 in Montgomery County and 14E40 in Buchanan County responded in a manner similar to each other. Water levels generally were near or lower than average from October through February and were variable for the rest of the year.

Water levels in northwestern Virginia (index wells 46W175 in Clarke County, 50W4C in Loudoun County, and 41Q1 in Rockingham County) reflected the dry conditions and generally were below average throughout the year (fig. 1). Water levels in well 50W4C were substantially below average for the first three quarters of the year, establishing several record monthly low levels, and near average the last part of the year. Water levels were below average throughout the year in wells 46W175 and 41Q1.

The central Piedmont Physiographic Province of Virginia (index wells 41H3 in Buckingham County and 45N1 in Louisa County) continued to be the part of the State most affected by the dry conditions that began during the summer of 1998. Water levels in these wells were about 5 to 12 ft lower than average monthly levels throughout the 2001 water year (fig. 1). Each monthly water level in well 41H3 was the lowest level for that month since levels were first measured in 1971; such record low levels have occurred every month since December 1998. In well 45N1, water levels were near record monthly low levels through December and established record monthly low levels throughout the rest of the year.

In summary, water levels ranged from lower than to higher than the average monthly levels in the eastern, southern, and southwestern parts of the State but generally were lower than average from the central Piedmont through the northwestern part of the State.



**Figure 1.** Monthly ground-water levels at index observation wells in water-table aquifers.

## WATER RESOURCES DATA - VIRGINIA, 2001

### Confined Coastal Plain Aquifers

The Coastal Plain of Virginia is in the eastern part of the State (fig. 4) and is underlain by an interlayered system of sandy aquifers separated by silty and clayey confining units. These aquifers are laterally continuous throughout the Coastal Plain of Virginia and extend into adjacent states. The confined aquifers are among the highest water-yielding aquifers in Virginia. Consequently, large amounts of water are withdrawn by industrial, municipal, agricultural, and domestic users. The Coastal Plain aquifer system increases in thickness toward the east such that the greatest depth of aquifers from which water can be withdrawn typically increases to the east.

Because of the lateral continuity of these aquifers, declines in water levels that result from pumpage can extend over large areas. The magnitude of the decline in a particular well depends on the hydraulic properties of the aquifers and confining units, the amount of water pumped, and the proximity of the well to the pumpage. Consequently, water levels in wells reflect the combined effects of regional declines from pumpage throughout the aquifer system and local declines from nearby pumpage. In the early 1900s, prior to significant pumpage from the confined aquifers, water levels throughout the Coastal Plain were above sea level and likely were near land surface. In the eastern part of the Coastal Plain, water flowed from many wells at land surface, indicating that water levels were above land surface.

Water levels have declined since pumpage from the confined aquifers began. This decline has been well documented in numerous data and interpretive reports. Water levels in the two index wells (wells 55B16 in Isle of Wight County and 56H27 in James City County) reflect the recent declines.

Well 55B16 is open to the middle Potomac aquifer. The small, short-term changes in water levels in this well likely result from changes in local pumpage (fig. 2). Because water levels in this area were likely near land surface prior to pumpage, water levels probably declined about 100 ft at this location before 1960 when water levels were first measured in this well. Water levels in this well have declined an additional 100 ft since 1960, mostly during the 1960s. Recent water levels generally changed less than early water levels. Water levels in 2001 generally were similar to or lower than those in 2000 but somewhat higher than those of the early to mid 1990s.

Well 56H27 is open to the Brightseat-upper Potomac aquifer. Because of the low frequency at which water levels are measured, the effects of local pumpage on water levels in this well cannot be readily evaluated. Because land surface at this well is about 100 ft above sea level, water levels at this location likely declined 50 to 100 ft before 1985 when water levels were first measured (fig. 2). Water levels in this well have declined more than 23 ft since 1985. Unlike water levels in well 55B16, water levels in well 56H27 continued to decline during the 2001 water year, establishing a new record low level on July 23, 2001.

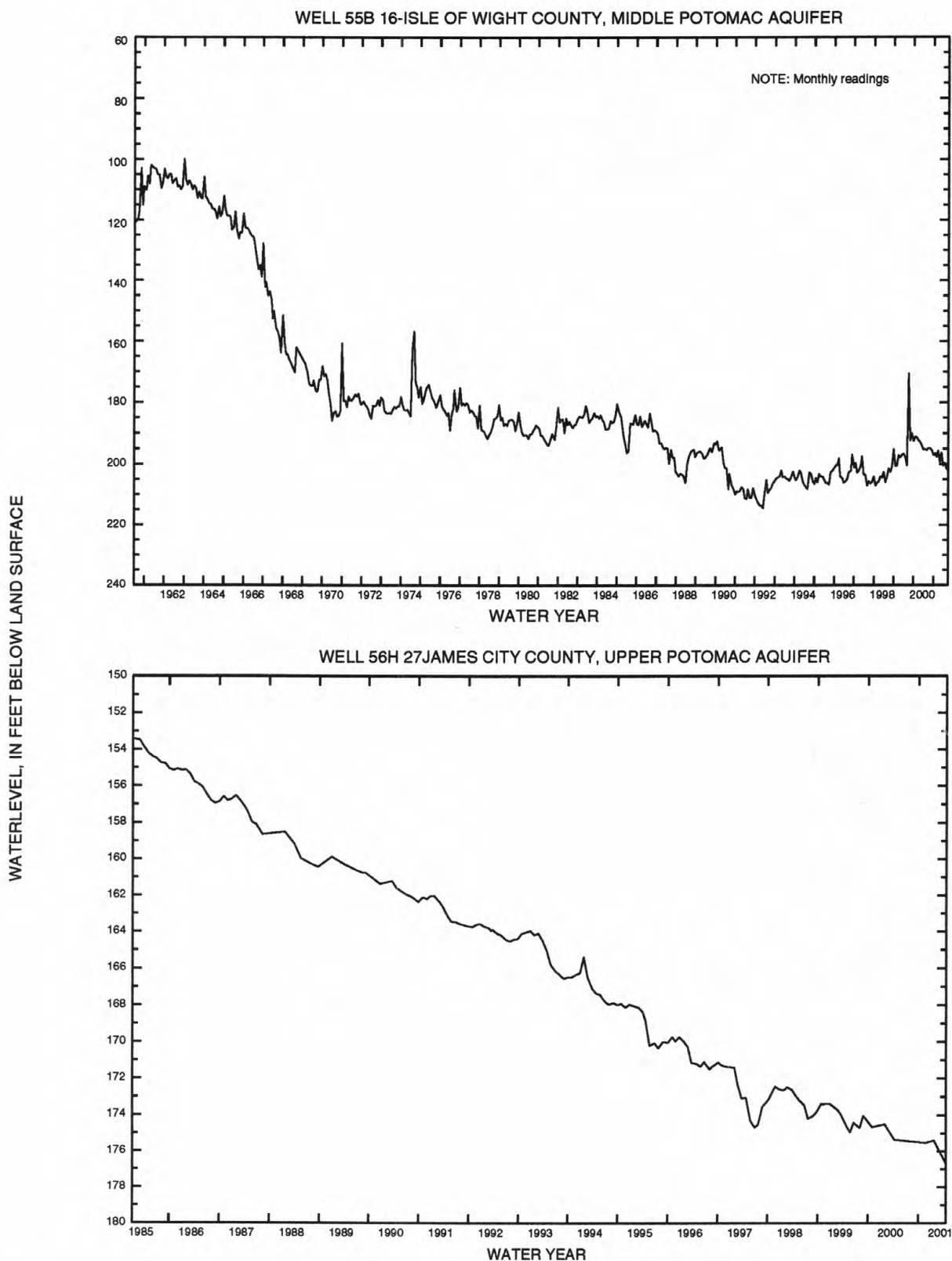
### EXPLANATION OF THE RECORDS

The ground-water records published in this report are for the 2001 water year that began October 1, 2000, and ended September 30, 2001. A calendar of the water year is provided on the inside of the front cover. The records contain ground-water-level and ground-water-quality data. The locations of the wells where the water-level data were collected are shown in figures 4, 5, 6, and 7. The following sections of the introductory text are presented to provide users with a more detailed explanation of how the hydrologic data published in this report were collected, analyzed, computed, and arranged for presentation.

#### Station Identification Numbers

Each well in this report is assigned a unique identification number. This number is unique in that it applies specifically to a given well and to no other. The number usually is assigned when a well is first established in U.S. Geological Survey records and is retained for that well indefinitely. The system used by the U.S. Geological Survey to assign identification numbers for ground-water well sites is based on geographic location. The "latitude-longitude" system is used for wells.



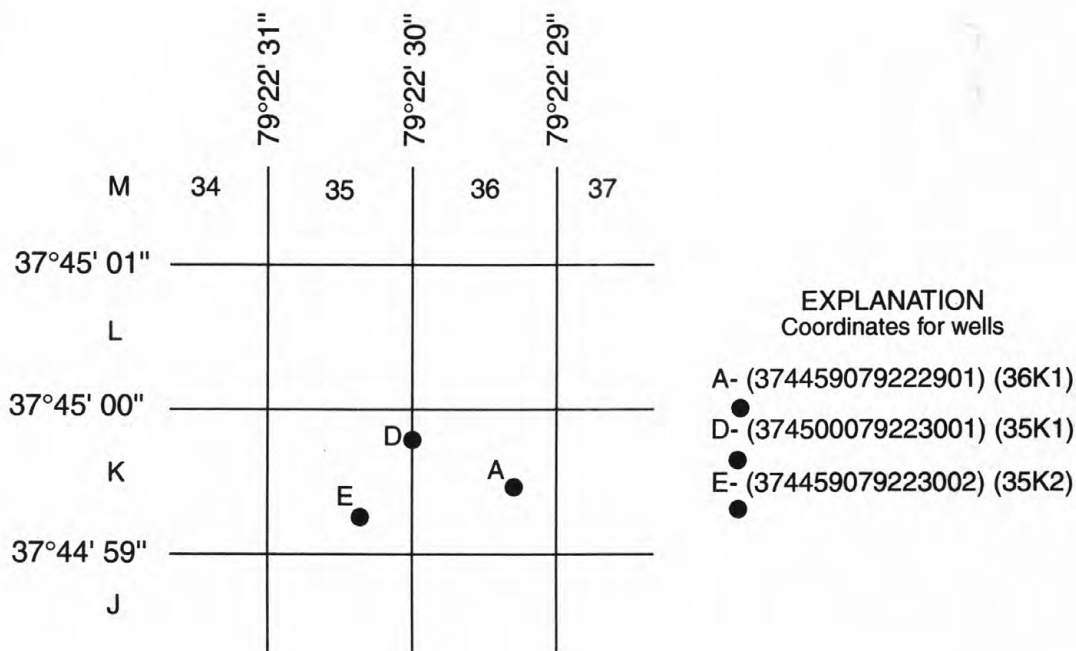


**Figure 2.** Ground-water levels in selected observation wells in confined Coastal Plain aquifers.

## WATER RESOURCES DATA - VIRGINIA, 2001

## Latitude-Longitude System

The identification numbers for wells are assigned according to the grid system of latitude and longitude. The number consists of 15 digits. The first six digits denote the degrees, minutes, and seconds of latitude, the next seven digits denote degrees, minutes, and seconds of longitude, and the last two digits (assigned sequentially) identify the wells or other sites within a 1-second grid. This site-identification number, once assigned, is a pure number and has no locational significance. In the rare instance where the initial determination of latitude and longitude are found to be in error, the station will retain its initial identification number; however, its true latitude and longitude will be listed in the LOCATION paragraph of the station description.



**Figure 3.** System for numbering wells.

A second well-numbering system used in Virginia utilizes 7 1/2-minute quadrangles within the State. The quadrangles are numbered from west to east, and lettered from south to north, omitting the letters "I" and "O." The designation for each quadrangle is determined by the method "Read Right, Up." Wells are numbered serially within each quadrangle. This local well number is shown immediately after the primary well number.

Well records furnished by the State of Virginia also include the well number that is based on an indexing system used by the Virginia Department of Environmental Quality.

## WATER RESOURCES DATA - VIRGINIA, 2001

### Records of Ground-Water Levels

Only water-level data from a national network of observation wells are given in this report. These data are intended to provide a sampling and historical record of water-level changes in the Nation's most important aquifers. Locations of the observation wells in this network in Virginia are shown in figures 4, 5, 6, and 7.

### Data Collection and Computation

Measurements of water levels are made in many types of wells under varying conditions, but the methods of measurement are standardized to the extent possible. The equipment and measuring techniques used at each observation well ensure that measurements at each well are of consistent accuracy and reliability.

Tables of water-level data are presented by counties arranged in alphabetical order. The prime identification number for a given well is the 15-digit number that appears in the upper left corner of the table. The secondary identification number is the local well number, an alphanumeric number, derived from the township-range location of the well.

Water-level data are obtained from direct measurements with a steel tape or manometer, or from graphic, punched tape, or electronic water-stage recorder. The water-level measurements in this report are given in feet with reference to land-surface datum (lsd). Land-surface datum is a datum plane that is approximately at land surface at each well. If known, the elevation of the land-surface datum is given in the well description. The height of the measuring point (MP) above or below land-surface datum is given in each well description. Water levels in wells equipped with recording gages are reported for every fifth day and the end of each month (eom).

Water levels are reported to as many significant figures as can be justified by the local conditions. For example, in a measurement of a depth to water of several hundred feet, the error of determining the absolute value of the total depth to water may be a few tenths of a foot, whereas the error in determining the net change of water level between successive measurements may be only a hundredth or a few hundredths of a foot. For lesser depths to water, the accuracy is greater. Accordingly, most measurements are reported to a hundredth of a foot, but some are given to a tenth of a foot or a larger unit.

### Data Presentation

Each well record consists of three parts, the station description, the data table of water levels observed during the current water year, and a graph of the water levels for the current water year or other selected period. The description of the well is presented first through use of descriptive headings preceding the tabular data. The comments to follow clarify information presented under the various headings.

**LOCATION.**--This paragraph follows the well-identification number and reports the latitude and longitude (given in degrees, minutes, and seconds); a landline location designation; the hydrologic-unit number; the distance and direction from a geographic point of reference; and the owner's name.

**AQUIFER.**--This entry designates by name (if a name exists) and geologic age the aquifer(s) open to the well.

**WELL CHARACTERISTICS.**--This entry describes the well in terms of depth, diameter, casing depth and/or screened interval, method of construction, use, and additional information such as casing breaks, collapsed screen, and other changes since construction.

**INSTRUMENTATION.**--This paragraph provides information on both the frequency of measurement and the collection method used, allowing the user to better evaluate the reported water-level extremes by knowing whether they are based on weekly, monthly, or some other frequency of measurement.

**DATUM.**--This entry describes both the measuring point and the land-surface elevation at the well. The measuring point is described physically (such as top of collar, notch in top of casing, plug in pump base and so on), and in relation to land surface (such as 1.3 ft above land-surface datum). The elevation of the land-surface datum is described in feet above (or below) sea level; it is reported with a precision depending on the method of determination.

**REMARKS.**--This entry describes factors that may influence the water level in a well or the measurement of the water level. It should identify wells that also are water-quality observation wells, and may be used to acknowledge the assistance of local (non-Survey) observers.

**PERIOD OF RECORD.**--This entry indicates the period for which there are published records for the well. It reports the month and year of the start of publication of water-level records by the U.S. Geological Survey and the words "to current year" if the records are to be continued into the following year. Periods for which water-level records are available, but are not published by the Geological Survey, may be noted.

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EXTREMES FOR PERIOD OF RECORD.--This entry contains the highest and lowest water levels of the period of published record, with respect to land-surface datum, and the dates of their occurrence.

EXTREMES FOR CURRENT YEAR.--This entry contains the highest and lowest instantaneous water levels, along with the dates of occurrence, at sites with water-stage recorders. The values are for the current water year, and are with respect to land-surface datum.

A table of water levels follows the station description for each well. Water levels are reported in feet below land-surface datum and all taped measurements of water level are listed. For wells equipped with recorders, only abbreviated tables are published; generally, only water-level lows are listed for every fifth day and at the end of the month (eom). The highest and lowest water levels of the water year and their dates of occurrence are shown on a line below the abbreviated table. Because all values are not published for wells with recorders, the extremes may be values that are not listed in the table. Missing records are indicated by dashes in place of the water level. A hydrograph for a selected period of record follows each water-level table.

### Records of Ground-Water Quality

Records of ground-water quality in this report differ from other types of records in that, for most sampling sites, they consist of only one set of measurements for the water year. The quality of ground water ordinarily changes only slowly; therefore, for most general purposes, one annual sampling, or only a few samples taken at infrequent intervals during the year, is sufficient. Frequent measurement of the same constituents is not necessary unless one is concerned with a particular problem, such as monitoring for trends in nitrate concentration. In the special cases where the quality of ground water may change more rapidly, more frequent measurements are made to identify the nature of the changes.

### Data Collection and Computation

The records of ground-water quality in this report were obtained mostly as a part of special studies in specific areas. Consequently, a number of chemical analyses are presented for some counties but none are presented for others. As a result, the records for this year, by themselves, do not provide a balanced view of ground-water quality Statewide. Such a view can be attained only by considering records for this year in context with similar records obtained for these and other counties in earlier years.

Most methods for collecting and analyzing water samples are described in the "U.S. Geological Survey Techniques of Water-Resources Investigations" publications referred to in the "On-site Measurements and Sample Collection" and the "Laboratory Measurements" sections in this data report. In addition, the TWRI book 1, Chapter D2, describes guidelines for the collection and field analysis of ground-water samples for selected unstable constituents. The values reported in this report represent water-quality conditions at the time of sampling as much as possible, consistent with available sampling techniques and methods of analysis. These methods are consistent with ASTM standards and generally follow ISO standards. All samples were obtained by trained personnel. The wells sampled were pumped long enough to assure that the water collected came directly from the aquifer and had not stood for a long time in the well casing where it would have been exposed to the atmosphere and to the material, possibly metal, comprising the casings.

### Data Presentation

The records of ground-water quality are published in a section titled QUALITY OF GROUND WATER immediately following the ground-water-level records. Data for quality of ground water are listed alphabetically by County and are identified by well number. The prime identification number for wells sampled is the 15-digit number derived from the latitude-longitude locations. No descriptive statements are given for ground-water-quality records; however, the well number, depth of well, date of sampling, and other pertinent data are given in the table containing the chemical analyses of the ground water.



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## Remark Codes

The following remark codes may appear with the ground-water-quality data in this report:

PRINTED OUTPUT	REMARK
E	Estimated value
>	Actual value is known to be greater than the value shown
<	Actual value is known to be less than the value shown
K	Results based on colony count outside the acceptance range (non-ideal colony count)
L	Biological organism count less than 0.5 percent (organism may be observed rather than counted)
D	Biological organism count equal to or greater than 15 percent (dominant)
V	Analyte was detected in both the environmental sample and the associated blanks.
&	Biological organism estimated as dominant
M	Constituent was detected but not quantified.

## Water Quality-Control Data

Data generated from quality-control (QC) samples are a requisite for evaluating the quality of the sampling and processing techniques as well as data from the actual samples themselves. Without QC data, environmental sample data cannot be adequately interpreted because the errors associated with the sample data are unknown. The various types of QC samples collected by this district are described in the following section. Procedures have been established for the storage of water-quality-control data within the USGS. These procedures allow for storage of all derived QC data and are identified so that they can be related to corresponding environmental samples.

## Blank Samples

Blank samples are collected and analyzed to ensure that environmental samples have not been contaminated by the overall data-collection process. The blank solution used to develop specific types of blank samples is a solution that is free of the analytes of interest. Any measured value signal in a blank sample for an analyte (a specific component measured in a chemical analysis) that was absent in the blank solution is believed to be due to contamination. There are many types of blank samples possible, each designed to segregate a different part of the overall data-collection process. The types of blank samples collected in this district are:

**Source solution blank** a blank solution that is transferred to a sample bottle in an area of the office laboratory with an atmosphere that is relatively clean and protected with respect to target analytes.

**Ambient blank** a blank solution that is put in the same type of bottle used for an environmental sample, kept with the set of sample bottles before sample collection, and opened at the site and exposed to the ambient conditions.

**Field blank** - a blank solution that is subjected to all aspects of sample collection, field processing, preservation, transportation, and laboratory handling as an environmental sample.

**Trip blank** - a blank solution that is put in the same type of bottle used for an environmental sample and kept with the set of sample bottles before and after sample collection.

**Equipment blank** - a blank solution that is processed through all equipment used for collecting and processing an environmental sample (similar to a field blank but normally done in the more controlled conditions of the office).

**Sampler blank** - a blank solution that is poured or pumped through the same field sampler used for collecting an environmental sample.

**Pump blank** a blank solution that is processed through the same pump-and-tubing system used for an environmental sample.

**Standpipe blank** a blank solution that is poured from the containment vessel (stand-pipe) before the pump is inserted to obtain the pump blank.

## WATER RESOURCES DATA - VIRGINIA, 2001

Filter blank - a blank solution that is filtered in the same manner and through the same filter apparatus used for an environmental sample.

Splitter blank - a blank solution that is mixed and separated using a field splitter in the same manner and through the same apparatus used for an environmental sample.

Preservation blank - a blank solution that is treated with the sampler preservatives used for an environmental sample.

Canister blank a blank solution that is taken directly from a stainless steel canister just before the VOC sampler is submerged to obtain a field blank sample.

### Reference Samples

Reference material is a solution or material prepared by a laboratory whose composition is certified for one or more properties so that it can be used to assess a measurement method. Samples of reference material are submitted for analysis to ensure that an analytical method is accurate for the known properties of the reference material. Generally, the selected reference material properties are similar to the environmental sample properties.

### Replicate Samples

Replicate samples are a set of environmental samples collected in a manner such that the samples are thought to be essentially identical in composition. Replicate is the general case for which a duplicate is the special case consisting of two samples. Replicate samples are collected and analyzed to establish the amount of variability in the data contributed by some part of the collection and analytical process. There are many types of replicate samples possible, each of which may yield slightly different results in a dynamic hydrologic setting, such as a flowing stream. The types of replicate samples collected in this district are:

Concurrent sample a type of replicate sample in which the samples are collected simultaneously with two or more samplers or by using one sampler and alternating collection of samples into two or more compositing containers.

Sequential samples - a type of replicate sample in which the samples are collected one after the other, typically over a short time.

Split sample - a type of replicate sample in which a sample is split into subsamples contemporaneous in time and space.

### Spike Samples

Spike samples are samples to which known quantities of a solution with one or more well-established analyte concentrations have been added. These samples are analyzed to determine the extent of matrix interference or degradation on the analyte concentration during sample processing and analysis.

Concurrent sample a type of spike sample that is collected at the same time with the same sampling and compositing devices then spiked with the same spike solution containing laboratory-certified concentrations of selected analytes.

Split sample a type of spike sample in which a sample is split into subsamples contemporaneous in time and space then spiked with the same spike solution containing laboratory-certified concentrations of selected analytes.

## ACCESS TO USGS WATER DATA

The USGS provides near real-time stage and discharge data for many of the gaging stations equipped with the necessary telemetry and historic daily-mean and peak-flow discharge data for most current or discontinued gaging stations through the world wide web (WWW). These data may be accessed at:

<http://va.water.usgs.gov>

Some water-quality and ground-water data also are available through the WWW. In addition, data can be provided in various machine-readable formats on magnetic tape or 3-1/2 inch floppy disk. Information about the availability of specific types of data or products, and user charges, can be obtained locally from each of the Water Resources Division District Offices (See address on the back of the title page.)

## DEFINITION OF TERMS

Terms related to streamflow, water-quality, and other hydrologic data, as used in this report, are defined below. See also table for converting English units to International System (SI) Units on the inside of the back cover.

**Acid neutralizing capacity** (ANC) is the equivalent sum of all bases or base-producing materials, solutes plus particulates, in an aqueous system that can be titrated with acid to an equivalence point. This term designates titration of an "unfiltered" sample (formerly reported as alkalinity).

**Acre-foot** (AC-FT, acre-ft) is the quantity of water required to cover 1 acre to a depth of 1 foot and is equivalent to 43,560 cubic feet, 325,851 gallons, or 1,233 cubic meters.

**Adenosine triphosphate** (ATP) is an organic, phosphate-rich, compound important in the transfer of energy in organisms. Its central role in living cells makes it an excellent indicator of the presence of living material in water. A measurement of ATP therefore provides a sensitive and rapid estimate of biomass. ATP is reported in micrograms per liter.

**Algae** are mostly aquatic single-celled, colonial, or multicelled plants containing chlorophyll and lacking roots, stems, and leaves.

**Algal growth potential** (AGP) is the maximum algal dry weight biomass that can be produced in a natural water sample under standardized laboratory conditions. The growth potential is the algal biomass present at stationary phase and is expressed as milligrams dry weight of algae produced per liter of sample.

**Alkalinity** is the capacity of solutes in an aqueous system to neutralize acid. This term designates titration of a "filtered" sample.

**Annual runoff** is the total quantity of water in runoff for a drainage area for the year. Data reports may use any of the following units of measurement in presenting annual runoff data:

**Acre-foot** (AC-FT, acre-ft) is the quantity of water required to cover 1 acre to a depth of 1 foot and is equal to 43,560 cubic feet, 325,851 gallons, or 1,233 cubic meters.

**Cubic foot per second per square mile** [CFSM, (ft<sup>3</sup>/s)/mi<sup>2</sup>] is the average number of cubic feet of water flowing per second from each square mile of area drained, assuming the runoff is distributed uniformly in time and area.

**Inch** (IN., in.) as used in this report, refers to the depth to which the drainage area would be covered with water if all of the runoff for a given time period were uniformly distributed on it.

**Aroclor** is the registered trademark for a group of polychlorinated biphenyls that were manufactured by the Monsanto Company prior to 1976. Aroclors are assigned specific 4-digit reference numbers dependent upon molecular type and degree of substitution of the biphenyl ring hydrogen atoms by chlorine atoms. The first two digits of a numbered aroclor represent the molecular type and the last two digits represent the weight percent of the hydrogen substituted chlorine.

**Bacteria** are microscopic unicellular organisms, typically spherical, rodlike, or spiral and threadlike in shape, often clumped into colonies. Some bacteria cause disease, while others perform an essential role in nature in the recycling of materials; for example, by decomposing organic matter into a form available for reuse by plants.

**Total coliform bacteria** are a particular group of bacteria that are used as indicators of possible sewage pollution. This group includes coliforms that inhabit the intestine of warm-blooded animals and those that inhabit soils. They are characterized as aerobic or facultative anaerobic, gram-negative, nonspore-forming, rod-shaped bacteria that ferment lactose with gas formation within 48 hours at 35 °C. In the laboratory, these bacteria are defined as all the organisms that produce colonies with a golden-green metallic sheen within 24 hours when incubated at 35 °C plus or minus 1.0 °C on M-Endo medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

**Fecal coliform bacteria** are bacteria that are present in the intestine or feces of warm-blooded animals. They are often used as indicators of the sanitary quality of the water. In the laboratory, they are defined as all organisms that produce blue colonies within 24 hours when incubated at 44.5 °C plus or minus 0.2 °C on M-FC medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

**Fecal streptococcal bacteria** are bacteria found in the intestine of warm-blooded animals. Their presence in water is considered to verify fecal pollution. They are characterized as gram-positive, cocci bacteria that are capable of growth in brain-heart infusion broth. In the laboratory, they are defined as all the organisms that produce red or pink colonies within 48 hours at 35 °C plus or minus 1.0 °C on KF-streptococcus medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

**Enterococcus bacteria** are commonly found in the feces of humans and other warm-blooded animals. Although some strains are ubiquitous and not related to fecal pollution, the presence of enterococci in water is an indication of fecal pollution and the possible presence of enteric pathogens. Enterococcus bacteria are those bacteria that produce pink to red colonies with black or reddish-brown precipitate after incubation at 41 °C on mE agar and subsequent transfer to EIA medium. Enterococci include *Streptococcus faecalis*, *Streptococcus faecium*, *Streptococcus avium*, and their variants.

**Escherichia coli (E. coli)** are bacteria present in the intestine and feces of warm-blooded animals. *E. coli* are a member species of the fecal coliform group of indicator bacteria. In the laboratory, they are defined as those bacteria that produce yellow or yellow-brown colonies on a filter pad saturated with urea substrate broth after primary culturing for 22 to 24 hours at 44.5 °C on mTEC medium. Their concentrations are expressed as number of colonies per 100 mL of sample.

**Base flow** is flow in a channel sustained by ground-water discharge in the absence of direct runoff.

**Bed material** is the sediment mixture of which a streambed, lake, pond, reservoir, or estuary bottom is composed.

**Benthic organisms** (invertebrates) are the group of animals inhabiting the bottom of an aquatic environment. They include a number of types of organisms, such as bacteria, fungi, insect larvae and nymphs, snails, clams, and crayfish. They are useful as indicators of water quality.

**Biochemical oxygen demand (BOD)** is a measure of the quantity of dissolved oxygen, in milligrams per liter, necessary for the decomposition of organic matter by microorganisms, such as bacteria.

**Biomass** is the amount of living matter present at any given time, expressed as mass per unit area or volume of habitat.

**Ash mass** is the mass or amount of residue present after the residue from the dry mass determination has been ashed in a muffle furnace at a temperature of 500 °C for 1 hour. Ash mass of zooplankton and phytoplankton is expressed in grams per cubic meter ( $\text{g}/\text{m}^3$ ), and periphyton and benthic organisms in grams per square meter ( $\text{g}/\text{m}^2$ ).

**Dry mass** refers to the mass of residue present after drying in an oven at 105 °C for zooplankton and periphyton, until the mass remains unchanged. This mass represents the total organic matter, ash, and sediment in the sample. Dry mass is expressed in the same units as ash mass.

**Organic mass** or volatile mass of the living substance is the difference between the dry mass and ash mass and represents the actual mass of the living matter. Organic mass is expressed in the same units as for ash mass and dry mass.

**Wet mass** is the mass of living matter plus contained water.

**Biomass pigment ratio** is an indicator of the total proportion of periphyton which are autotrophic (plants). This is also called the Autotrophic Index.

**Bottom material:** See "Bed material."

**Cells/volume** refers to the number of plankton cells or natural units counted using a microscope and grid or counting cell. Results are generally reported as cells or units per milliliter.



**Cells volume (biovolume)** determination is one of several common methods used to estimate biomass of algae in aquatic systems. Cell members of algae are frequently used in aquatic surveys as an indicator of algal production. However, cell numbers alone cannot represent true biomass because of considerable cell-size variation among the algal species. Cell volume ( $\mu\text{m}^3$ ) is determined by obtaining critical cell measurements on cell dimensions (for example, length, width, height, or radius) for 20 to 50 cells of each important species to obtain an average biovolume per cell. Cells are categorized according to the correspondence of their cellular shape to the nearest geometric solid or combinations of simple solids (for example, spheres, cones, or cylinders). Representative formulae used to compute biovolume are as follows:

sphere  $\frac{4}{3} \pi r^3$  cone  $\frac{1}{3} \pi r^2 h$  cylinder  $\pi r^2 h$ .

From cell volume, total algal biomass expressed as biovolume ( $\mu\text{m}^3/\text{mL}$ ) is thus determined by multiplying the number of cells of a given species by its average cell volume and then summing these volumes over all species.

**Chemical oxygen demand (COD)** is a measure of the chemically oxidizable material in the water and furnishes an approximation of the amount of organic and reducing material present. The determined value may correlate with BOD or with carbonaceous organic pollution from sewage or industrial wastes.

**Chlorophyll** refers to the green pigments of plants. Chlorophyll a and b are the two most common green pigments in plants.

**Colloid** is any substance with particles in such a fine state of subdivision dispersed in a medium (for example, water) that they do not settle out; but not in so fine a state of subdivision that they can be said to be truly dissolved.

**Color unit** is produced by 1 milligram per liter of platinum in the form of the chloroplatinate ion. Color is expressed in units of the platinum-cobalt scale.

**Confined aquifer** is a term used to describe an aquifer containing water between two relatively impermeable boundaries. The water level in a well tapping a confined aquifer stands above the top of the confined aquifer and can be higher or lower than the water table that may be present in the material above it. In some cases the water level can rise above the ground surface, yielding a flowing well.

**Contents** is the volume of water in a reservoir or lake. Unless otherwise indicated, volume is computed on the basis of a level pool and does not include bank storage.

**Continuous-record station** is a site that meets either of the following conditions:

1. Stage or streamflow are recorded at some interval on a continuous basis. The recording interval is usually 15 minutes, but may be less or more frequent.
2. Water-quality, sediment, or other hydrologic measurements are recorded at least daily.

**Control** designates a feature in the channel downstream from a gaging station that physically influences the water-surface elevation and thereby determines the stage-discharge relation at the station. This feature may be a constriction of the channel, a bedrock outcrop, a gravel bar, an artificial structure, or a uniform cross section over a long reach of the channel.

**Control structure** as used in this report is a structure on a stream or canal that is used to regulate the flow or stage of the stream or to prevent the intrusion of saltwater.

**Cubic foot per second (CFS,  $\text{ft}^3/\text{s}$ )** is the rate of discharge representing a volume of 1 cubic foot passing a given point in 1 second. It is equivalent to approximately 7.48 gallons per second, 448.8 gallons per minute, or 0.02832 cubic meters per second.

**Cubic foot per second-day (CFS-DAY, Cfs-day,  $[(\text{ft}^3/\text{s})/\text{d}]$ )** is the volume of water represented by a flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, 1.9835 acre-feet, 646,317 gallons, or 2,447 cubic meters.

**Daily record** is a summary of streamflow, sediment, or water-quality values computed from data collected with sufficient frequency to obtain reliable estimates of daily mean values.

**Daily record station** is a site for which daily records of streamflow, sediment, or water-quality values are computed.

**Datum**, as used in this report, is an elevation above mean sea level to which all gage height readings are referenced.

**Diel** is of or pertaining to a 24-hour period of time; a regular daily cycle.

**Discharge**, or flow, is the volume of water (or more broadly, volume of fluid including solid- and dissolved-phase material), that passes a given point in a given period of time.

**Annual 7-day minimum** is the lowest mean discharge for 7 consecutive days in a year. Note that most low-flow frequency analyses of annual 7-day minimum flows use a climatic year (April 1-March 31). The date shown in the summary statistics table is the initial date of the 7-day period. (This value should not be confused with the 7-day 10-year low-flow statistic.)

**Instantaneous discharge** is the discharge at a particular instant of time.

**Mean discharge (MEAN)** is the arithmetic mean of individual daily mean discharges during a specific period.

**Dissolved** refers to that material in a representative water sample that passes through a 0.45-micrometer membrane filter. This is a convenient operational definition used by Federal agencies that collect water data. Determinations of "dissolved" constituents are made on subsamples of the filtrate.

**Dissolved oxygen (DO)** content of water in equilibrium with air is a function of atmospheric pressure, temperature, and dissolved-solids concentration of the water. The ability of water to retain oxygen decreases with increasing temperature or dissolved solids, with small temperature changes having the more significant offset. Photosynthesis and respiration may cause diurnal variations in dissolved-oxygen concentration in water from some streams.

**Dissolved-solids concentration** of water is determined either analytically by the "residue-on-evaporation" method, or mathematically by totaling the concentrations of individual constituents reported in a comprehensive chemical analysis. During that analytical determination of dissolved solids, the bicarbonate (generally a major dissolved component of water) is converted to carbonate. Therefore, in the mathematical calculation of dissolved-solids concentration, the bicarbonate value, in milligrams per liter, is multiplied by 0.4926 to reflect the change. Alternatively, alkalinity concentration (as mg/L CaCO<sub>3</sub>) can be converted to carbonate concentration by multiplying by 0.60.

**Diversity index** is a numerical expression of evenness of distribution of aquatic organisms. The formula for diversity index is:

$$= - \sum_{i=1}^s \frac{n_i}{n} \log_2 \frac{n_i}{n}$$

where  $n_i$  is the number of individuals per taxon,  $n$  is the total number of individuals, and  $s$  is the total number of taxa in the sample of the community. Diversity index values range from zero, when all the organisms in the sample are the same, to some positive number, when some or all of the organisms in the sample are different.

**Drainage area** of a site on a stream is that area, measured in a horizontal plane, that has a common outlet at the site for its surface runoff. Figures of drainage area given herein include all closed basins, or noncontributing areas, within the area unless otherwise specified.

**Drainage basin** is a part of the Earth's surface that is occupied by a drainage system with a common outlet for its surface runoff (see "Drainage area").

**Dry weight** refers to the weight of animal tissue after it has been dried in an oven at 65 °C until a constant weight is achieved. Dry weight represents total organic and inorganic matter in the tissue.

**Flow-duration percentiles** are values on a scale of 100 that indicate the percentage of time for which a flow is not exceeded. For example, the 90th percentile of river flow is greater than or equal to 90 percent of all recorded flow rates.

**Gage datum** is the elevation of the zero point of the reference gage from which gage height is determined as compared to sea level (see "Datum"). This elevation is established by a system of levels from known benchmarks, by approximation from topographic maps, or by geographical positioning system.

**Gage height** (G.H.) is the water-surface elevation referenced to the gage datum. Gage height is often used interchangeably with the more general term "stage," although gage height is more appropriate when used with a reading on a gage.

**Gaging station** is a site on a stream, canal, lake, or reservoir where systematic observations of stage, discharge, or other hydrologic data are obtained. When used in connection with a discharge record, the term is applied only to those gaging stations where a continuous record of discharge is computed.

**Gas chromatography/flame ionization detector** (GC/FID) is a laboratory analytical method used as a screening technique for semivolatile organic compounds that are extractable from water in methylene chloride.

**Ground-water level** is the elevation of the water table or another potentiometric surface at a particular location.

**Hardness** of water is a physical-chemical characteristic that is commonly recognized by the increased quantity of soap required to produce lather. It is attributable to the presence of alkaline earths (principally calcium and magnesium) and is expressed as the equivalent concentration of calcium carbonate ( $\text{CaCO}_3$ ).

**High tide** is the maximum height reached by each rising tide. The high-high and low-high tides are the higher and lower of the two high tides, respectively, of each tidal day. *See NOAA web site:*  
<http://www.co-ops.nos.noaa.gov/tideglos.html>

**Hydrologic benchmark station** is one that provides hydrologic data for a basin in which the hydrologic regimen will likely be governed solely by natural conditions. Data collected at a benchmark station may be used to separate effects of natural from human-induced changes in other basins that have been developed and in which the physiography, climate, and geology are similar to those in the undeveloped benchmark basin.

**Hydrologic unit** is a geographic area representing part or all of a surface drainage basin or distinct hydrologic feature as defined by the former Office of Water Data Coordination and delineated on the State Hydrologic Unit Maps by the U.S. Geological Survey. Each hydrologic unit is identified by an 8-digit number.

**Land-surface datum** (lsd) is a datum plane that is approximately at land surface at each ground-water observation well.

**Light-attenuation coefficient**, also known as the extinction coefficient, is a measure of water clarity. Light is attenuated according to the Lambert-Beer equation

$$I = I_0 e^{-\lambda L},$$

where  $I_0$  is the source light intensity,  $I$  is the light intensity at length  $L$  (in meters) from the source,  $\lambda$  is the light-attenuation coefficient, and  $e$  is the base of the natural logarithm. The light attenuation coefficient is defined as

$$\lambda = -\frac{1}{L} \log_e \frac{I}{I_0}.$$

**Lipid** is any one of a family of compounds that are insoluble in water and that make up one of the principal components of living cells. Lipids include fats, oils, waxes, and steroids. Many environmental contaminants such as organochlorine pesticides are lipophilic.

**Low tide** is the minimum height reached by each falling tide. The high-low and low-low tides are the higher and lower of the two low tides, respectively, of each tidal day. *See NOAA web site:*  
<http://www.co-ops.nos.noaa.gov/tideglos.html>

**Macrophytes** are the macroscopic plants in the aquatic environment. The most common macrophytes are the rooted vascular plants that are usually arranged in zones in aquatic ecosystems and restricted in the area by the extent of illumination through the water and sediment deposition along the shoreline.

**Measuring point** (MP) is an arbitrary permanent reference point from which the distance to water surface in a well is measured to obtain water level.

**Membrane filter** is a thin microporous material of specific pore size used to filter bacteria, algae, and other very small particles from water.



**Metamorphic stage** refers to the stage of development that an organism exhibits during its transformation from an immature form to an adult form. This developmental process exists for most insects, and the degree of difference from the immature stage to the adult form varies from relatively slight to pronounced, with many intermediates. Examples of metamorphic stages of insects are egg-larva-adult or egg-nymph-adult.

**Methylene blue active substances (MBAS)** are apparent detergents. The determination depends on the formation of a blue color when methylene blue dye reacts with synthetic anionic detergent compounds.

**Micrograms per gram (UG/G,  $\mu\text{g/g}$ )** is a unit expressing the concentration of a chemical constituent as the mass (micrograms) of the element per unit mass (gram) of material analyzed.

**Micrograms per kilogram (UG/KG,  $\mu\text{g/kg}$ )** is a unit expressing the concentration of a chemical constituent as the mass (micrograms) of the constituent per unit mass (kilogram) of the material analyzed. One microgram per kilogram is equivalent to 1 part per billion.

**Micrograms per liter (UG/L,  $\mu\text{g/L}$ )** is a unit expressing the concentration of chemical constituents in water as mass (micrograms) of constituent per unit volume (liter) of water. One thousand micrograms per liter is equivalent to 1 milligram per liter.

**Microsiemens per centimeter (US/CM,  $\mu\text{S/cm}$ )** is a unit expressing the amount of electrical conductivity of a solution as measured between opposite faces of a centimeter cube of solution at a specified temperature. Siemens is the International System of Units nomenclature. It is synonymous with mhos and is the reciprocal of resistance in ohms.

**Milligrams per liter (MG/L,  $\text{mg/L}$ )** is a unit for expressing the concentration of chemical constituents in water as the mass (milligrams) of constituent per unit volume (liter) of water. Concentration of suspended sediment also is expressed in  $\text{mg/L}$  and is based on the mass of dry sediment per liter of water-sediment mixture.

**Miscellaneous site**, or miscellaneous station, is a site where streamflow, sediment, and/or water-quality data are collected once, or more often on a random or discontinuous basis.

**Most probable number (MPN)** is an index of the number of coliform bacteria that, more probably than any other number, would give the results shown by the laboratory examination; it is not an actual enumeration. MPN is determined from the distribution of gas-positive cultures among multiple inoculated tubes.

**Multiple-plate samplers** are artificial substrates of known surface area used for obtaining benthic invertebrate samples. They consist of a series of spaced, hardboard plates on an eyebolt.

**Nanograms per liter (NG/L,  $\text{ng/L}$ )** is a unit expressing the concentration of chemical constituents in solution as mass (nanograms) of solute per unit volume (liter) of water. One million nanograms per liter is equivalent to 1 milligram per liter.

**National Geodetic Vertical Datum of 1929 (NGVD of 1929)** is a geodetic datum derived from a general adjustment of the first order level nets of the United States and Canada. It was formerly called "Sea Level Datum of 1929" or "mean sea level" in this series of reports. Although the datum was derived from the average sea level over a period of many years at 26 tide stations along the Atlantic, Gulf of Mexico, and Pacific Coasts, it does not necessarily represent local mean sea level at any particular place. See NOAA web site: <http://www.ngs.noaa.gov/faq.shtml#WhatVD29VD88>

**Nekton** are the consumers in the aquatic environment and consist of large free-swimming organisms that are capable of sustained, directed mobility.

**Nephelometric turbidity unit (NTU)** is the measurement for reporting turbidity that is based on use of a standard suspension of Formazin. Turbidity measured in NTU uses nephelometric methods that depend on passing specific light of a specific wavelength through the sample.

**Open or screened interval** is the length of unscreened opening or of well screen through which water enters a well, in feet below land surface.

**Organic carbon (OC)** is a measure of organic matter present in aqueous solution, suspension, or bottom sediments. May be reported as dissolved organic carbon (DOC), suspended organic carbon (SOC), or total organic carbon (TOC).



**Organism** is any living entity.

**Organism count/area** refers to the number of organisms collected and enumerated in a sample and adjusted to the number per area habitat, usually square meter (m<sup>2</sup>), acre, or hectare. Periphyton, benthic organisms, and macrophytes are expressed in these terms.

**Organism count/volume** refers to the number of organisms collected and enumerated in a sample and adjusted to the number per sample volume, usually milliliter (mL) or liter (L). Numbers of planktonic organisms can be expressed in these terms.

**Total organism count** is the total number of organisms collected and enumerated in any particular sample.

**Organochlorine compounds** are any chemicals that contain carbon and chlorine. Organochlorine compounds that are important in investigations of water, sediment, and biological quality include certain pesticides and industrial compounds.

**Parameter Code** is a 5-digit number used in the U.S. Geological Survey computerized data system, National Water Information System (NWIS), to uniquely identify a specific constituent or property.

**Partial-record station** is a site where discrete measurements of one or more hydrologic parameters are obtained over a period of time without continuous data being recorded or computed. A common example is a crest-stage gage partial-record station at which only peak stages and flows are recorded.

**Particle size** is the diameter, in millimeters (mm), of a particle determined by sieve or sedimentation methods. The sedimentation method utilizes the principle of Stokes Law to calculate sediment particle sizes. Sedimentation methods (pipet, bottom-withdrawal tube, visual-accumulation tube, Sedigraph) determine fall diameter of particles in either distilled water (chemically dispersed) or in native water (the river water at the time and point of sampling).

**Particle-size classification** used in this report agrees with the recommendation made by the American Geophysical Union Subcommittee on Sediment Terminology. The classification is as follows:

Classification	Size (mm)	Method of analysis
Clay	0.00024 - 0.004	Sedimentation
Silt	0.004 - 0.062	Sedimentation
Sand	0.062 - 2.0	Sedimentation/sieve
Gravel	2.0 - 64.0	Sieve

The particle-size distributions given in this report are not necessarily representative of all particles in transport in the stream. Most of the organic matter is removed, and the sample is subjected to mechanical and chemical dispersion before analysis in distilled water. Chemical dispersion is not used for native water analysis.

**Percent composition** or **percent of total** is a unit for expressing the ratio of a particular part of a sample or population to the total sample or population, in terms of types, numbers, weight, or volume.

**Periodic station** is a site where stage, discharge, sediment, chemical, or other hydrologic measurements are made one or more times during a year, but at a frequency insufficient to develop a daily record.

**Periphyton** is the assemblage of microorganisms attached to and living upon submerged solid surfaces. While primarily consisting of algae, they also include bacteria, fungi, protozoa, rotifers, and other small organisms. Periphyton are useful indicators of water quality.

**Pesticides** are chemical compounds used to control undesirable organisms. Major categories of pesticides include insecticides, miticides, fungicides, herbicides, and rodenticides.

**pH** of water is the negative logarithm of the hydrogen-ion activity. Solutions with pH less than 7 are termed "acidic," and solutions with a pH greater than 7 are termed "basic." Solutions with a pH of 7 are neutral. The presence and concentration of many dissolved chemical constituents found in water are, in part, influenced by the hydrogen-ion activity of water. Biological processes including growth, distribution of organisms, and toxicity of the water to organisms are also influenced, in part, by the hydrogen-ion activity of water.

**Picocurie (PC, pCi)** is one trillionth ( $1 \times 10^{-12}$ ) of the amount of radioactivity represented by a curie (Ci). A curie is the amount of radioactivity that yields  $3.7 \times 10^{10}$  radioactive disintegrations per second. A picocurie yields 2.22 dpm (disintegrations per minute).

**Plankton** is the community of suspended, floating, or weakly swimming organisms that live in the open water of lakes and rivers. Concentrations are expressed as a number of cells per milliliter (cells/mL of sample).

**Phytoplankton** is the plant part of the plankton. They are usually microscopic, and their movement is subject to the water currents. Phytoplankton growth is dependent upon solar radiation and nutrient substances. Because they are able to incorporate as well as release materials to the surrounding water, the phytoplankton have a profound effect upon the quality of the water. They are the primary food producers in the aquatic environment and are commonly known as algae.

**Blue-green algae** (*Cyanophyta*) are a group of phytoplankton organisms having a blue pigment, in addition to the green pigment called chlorophyll. Blue-green algae often cause nuisance conditions in water.

**Diatoms** are the unicellular or colonial algae having a siliceous shell. Their concentrations are expressed as number of cells per milliliter (cells/mL) of sample.

**Euglenoids** (*Euglenophyta*) are a group of algae that are usually free-swimming and rarely creeping. They have the ability to grow either photosynthetically in the light or heterotrophically in the dark.

**Fire algae** (*Pyrrophyta*) are a group of algae that are free-swimming unicells characterized by a red pigment spot.

**Green algae** have chlorophyll pigments similar in color to those of higher green plants. Some forms produce algae mats or floating "moss" in lakes. Their concentrations are expressed as number of cells per milliliter (cells/mL) of sample.

**Zooplankton** is the animal part of the plankton. Zooplankton are capable of extensive movements within the water column and are often large enough to be seen with the unaided eye. Zooplankton are secondary consumers feeding upon bacteria, phytoplankton, and detritus. Because they are the grazers in the aquatic environment, the zooplankton are a vital part of the aquatic food web. The zooplankton community is dominated by small crustaceans and rotifers.

**Polychlorinated biphenyls (PCB's)** are industrial chemicals that are mixtures of chlorinated biphenyl compounds having various percentages of chlorine. They are similar in structure to organochlorine insecticides.

**Polychlorinated naphthalenes (PCN's)** are industrial chemicals that are mixtures of chlorinated naphthalene compounds. They have properties and applications similar to polychlorinated biphenyls (PCB's) and have been identified in commercial PCB preparations.

**Primary productivity** is a measure of the rate at which new organic matter is formed and accumulated through photosynthetic and chemosynthetic activity of producer organisms (chiefly, green plants). The rate of primary production is estimated by measuring the amount of oxygen released (oxygen method) or the amount of carbon assimilated (carbon method) by the plants.

**Primary productivity (carbon method)** is expressed as milligrams of carbon per area per unit time [ $\text{mg C}/(\text{m}^2/\text{time})$ ] for periphyton and macrophytes or per volume [ $\text{mg C}/(\text{m}^3/\text{time})$ ] for phytoplankton. Carbon method defines the amount of carbon dioxide consumed as measured by radioactive carbon (carbon-14). The carbon-14 method is of greater sensitivity than the oxygen light and dark bottle method and is preferred for use in unenriched waters. Unit time may be either the hour or day, depending on the incubation period.

**Primary productivity (oxygen method)** is expressed as milligrams of oxygen per area per unit time [ $\text{mg O}/(\text{m}^2/\text{time})$ ] for periphyton and macrophytes or per volume [ $\text{mg O}/(\text{m}^3/\text{time})$ ] for phytoplankton. Oxygen method defines production and respiration rates as estimated from changes in the measured dissolved-oxygen concentration. The oxygen light and dark bottle method is preferred if the rate of primary production is sufficient for accurate measurements to be made within 24 hours. Unit time may be either the hour or day, depending on the incubation period.

**Radioisotopes** are isotopic forms of an element that exhibit radioactivity. Isotopes are varieties of a chemical element that differ in atomic weight, but are very nearly alike in chemical properties. The difference arises because the atoms of the isotopic forms of an element differ in the number of neutrons in the nucleus; for example, ordinary chlorine is a mixture of isotopes having atomic weights of 35 and 37, and the natural mixture has an atomic weight of about 35.453. Many of the elements similarly exist as mixtures of isotopes, and a great many new isotopes have been produced in the operation of nuclear devices such as the cyclotron. There are 275 isotopes of the 81 stable elements, in addition to more than 800 radioactive isotopes.

**Recoverable from bottom material** is the amount of a given constituent that is in solution after a representative sample of bottom material has been digested by a method (usually using an acid or mixture of acids) that results in dissolution of readily soluble substances. Complete dissolution of all bottom material is not achieved by the digestion treatment and thus the determination represents less than the total amount (that is, less than 95 percent) of the constituent in the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

**Recurrence interval**, also referred to as return period, is the average time, usually expressed in years, between occurrences of hydrologic events of a specified type (such as exceedances of a specified high flow or non-exceedance of a specified low flow). The terms "return period" and "recurrence interval" do not imply regular cyclic occurrence. The actual times between occurrences vary randomly, with most of the times being less than the average and a few being substantially greater than the average. For example, the 100-year flood is the flow rate that is exceeded by the annual maximum peak flow at intervals whose average length is 100 years (that is, once in 100 years, on average); almost two-thirds of all exceedances of the 100-year flood occur less than 100 years after the previous exceedance, half occur less than 70 years after the previous exceedance, and about one-eighth occur more than 200 years after the previous exceedance. Similarly, the 7-day 10-year low flow ( $7Q_{10}$ ) is the flow rate below which the annual minimum 7-day-mean flow dips at intervals whose average length is 10 years (that is, once in 10 years, on average); almost two-thirds of the non-exceedances of the  $7Q_{10}$  occur less than 10 years after the previous non-exceedance, half occur less than 7 years after, and about one-eighth occur more than 20 years after the previous non-exceedance. The recurrence interval for annual events is the reciprocal of the annual probability of occurrence. Thus, the 100-year flood has a 1-percent chance of being exceeded by the maximum peak flow in any year, and there is a 10-percent chance in any year that the annual minimum 7-day-mean flow will be less than the  $7Q_{10}$ .

**Replicate samples** are a group of samples collected in a manner such that the samples are thought to be essentially identical in composition.

**River mile** is the distance of a point on a river measured in miles from the river's mouth along the low-water channel.

**River mileage** is the linear distance along the meandering path of a stream channel determined in accordance with Bulletin No. 14 (October 1968) of the Water Resources Council.

**Runoff in inches** (IN., in.) is the depth, in inches, to which the drainage area would be covered if all the runoff for a given time period were uniformly distributed on it.

**Sea level** refers to the National Geodetic Vertical Datum of 1929 (NGVD of 1929)—a geodetic datum derived from a general adjustment of the first-order level nets of the United States and Canada, formerly called Sea Level Datum of 1929. See: [http://www.co-ops.nos.noaa.gov/glossary/gloss\\_n.html#NGVD](http://www.co-ops.nos.noaa.gov/glossary/gloss_n.html#NGVD)

**Sediment** is solid material that is transported by, suspended in, or deposited from water. It originates mostly from disintegrated rocks; it also includes chemical and biochemical precipitates and decomposed organic material, such as humus. The quantity, characteristics, and cause of the occurrence of sediment in streams are influenced by environmental factors. Some major factors are degree of slope, length of slope, soil characteristics, land usage, and quantity and intensity of precipitation.

**Bed load** is the sediment that is transported in a stream by rolling, sliding, or skipping along or very close to the bed. In this report, bed load is considered to consist of particles in transit from the bed to an elevation equal to the top of the bed-load sampler nozzle (usually within 0.25 ft of the streambed).



**Bed-load discharge** (tons per day) is the quantity of sediment moving as bed load, reported as dry weight, that passes a cross section in a given time.

**Suspended sediment** is the sediment that is maintained in suspension by the upward components of turbulent currents or that exists in suspension as a colloid.

**Suspended-sediment concentration** is the velocity-weighted concentration of suspended sediment in the sampled zone (from the water surface to a point approximately 0.3 ft above the bed) expressed as milligrams of dry sediment per liter of water-sediment mixture (mg/L). The entire sample is used for the analysis.

**Mean concentration of suspended sediment** is the time-weighted concentration of suspended sediment passing a stream section during a 24-hour day.

**Suspended-sediment discharge** (tons/day) is the quantity of sediment moving in suspension, reported as dry weight, that passes a cross section in a given time. It is calculated in units of tons per day as follows: concentration (mg/L) x discharge (ft<sup>3</sup>/s) x 0.0027.

**Suspended-sediment load** is a term that refers to material in suspension. The term needs to be qualified, such as "annual suspended-sediment load" or "sand-size suspended-sediment load," and so on. It is not synonymous with either suspended-sediment discharge or concentration.

**Total sediment discharge** (tons/day) is the sum of the suspended-sediment discharge and the bed-load discharge. It is the total quantity of sediment, reported as dry weight, that passes a cross section in a given time.

**Total sediment load** or total load is a term that refers to the total sediment (bed load plus suspended-sediment load) that is in transport. The term needs to be qualified, such as "annual suspended-sediment load" or "sand-size suspended-sediment load," and so on. It is not synonymous with total sediment discharge.

**Seven-day 10-year low flow** (7Q10, 7Q<sub>10</sub>) is the minimum flow averaged over 7 consecutive days that is expected to occur on average, once in any 10-year period. The 7Q10 has a 10-percent chance of occurring in any given year.

**Sodium adsorption ratio** (SAR) is the expression of relative activity of sodium ions in exchange reactions within soil and is an index of sodium or alkali hazard to the soil. Waters range in respect to sodium hazard from those which can be used for irrigation on almost all soils to those which are generally unsatisfactory for irrigation.

**Solute** is any substance that is dissolved in water.

**Specific conductance** is a measure of the ability of a water to conduct an electrical current. It is expressed in microsiemens per centimeter at 25 °C. Specific conductance is related to the type and concentration of ions in solution and can be used for approximating the dissolved-solids content of the water. Commonly, the concentration of dissolved solids (in milligrams per liter) is from 55 to 75 percent of the specific conductance (in microsiemens). This relation is not constant from stream to stream, and it may vary in the same source with changes in the composition of the water.

**Stable isotope ratio** (per MILL/MIL) is a unit expressing the ratio of the abundance of two radioactive isotopes. Isotope ratios are used in hydrologic studies to determine the age or source of specific waters, to evaluate mixing of different waters, as an aid in determining reaction rates, and other chemical or hydrologic processes.

**Stage:** See "Gage height."

**Stage-discharge relation** is the relation between the water-surface elevation, termed stage (gage height), and the volume of water flowing in a channel per unit time.

**Streamflow** is the discharge that occurs in a natural channel. Although the term "discharge" can be applied to the flow of a canal, the word "streamflow" uniquely describes the discharge in a surface stream course. The term "streamflow" is more general than "runoff" as streamflow may be applied to discharge whether or not it is affected by diversion or regulation.

**Substrate** is the physical surface upon which an organism lives.



**Artificial substrate** is a device which is purposely placed in a stream or lake for colonization of organisms. The artificial substrate simplifies the community structure by standardizing the substrate from which each sample is taken. Examples of artificial substrates are basket samplers (made of wire cages filled with clean streamside rocks) and multiplate samplers (made of hardboard) for benthic organism collection, and plexiglass strips for periphyton collection.

**Natural substrate** refers to any naturally occurring immersed or submersed solid surface, such as a rock or tree, upon which an organism lives.

**Surface area** of a lake or impoundment is that area encompassed by the boundary of the lake or impoundment as shown on USGS topographic maps, or on other available maps or photographs. The computed surface areas reflect the water levels of the lakes or impoundments at the times when the information for the maps or photographs was obtained.

**Surficial bed material** is the top 0.1 to 0.2 ft of the bed material that is sampled using U.S. Series Bed-Material Samplers.

**Suspended** (as used in tables of chemical analyses) refers to the amount (concentration) of undissolved material in a water-sediment mixture. It is associated with the material retained on a 0.45-micrometer filter.

**Suspended, recoverable** is the amount of a given constituent that is in solution after the part of a representative suspended-sediment sample that is retained on a 0.45-micrometer membrane filter has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all the particulate matter is not achieved by the digestion treatment and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the sample. To achieve comparability of analytical data, equivalent digestion procedures are required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Determinations of "suspended, recoverable" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total recoverable concentrations of the constituent.

**Suspended, total** is the total amount of a given constituent in the part of a representative suspended-sediment sample that is retained on a 0.45-micrometer membrane filter. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. Knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to determine when the results should be reported as "suspended, total."

Determinations of "suspended, total" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total concentrations of the constituent.

**Synoptic Studies** are short-term investigations of specific water-quality conditions during selected seasonal or hydrologic periods to provide improved spatial resolution for critical water-quality conditions. For the period and conditions sampled, they assess the spatial distribution of selected water-quality conditions in relation to causative factors, such as land use and contaminant sources.

**Taxonomy** is the division of biology concerned with the classification and naming of organisms. The classification of organisms is based upon a hierarchical scheme beginning with Kingdom and ending with Species at the base. The higher the classification level, the fewer features the organisms have in common. For example, the taxonomy of a particular mayfly, *Hexagenia limbata*, is the following:

Kingdom	Animal
Phylum	Arthropoda
Class	Insecta
Order	Ephemeroptera
Family	Ephemeridae
Genus	<i>Hexagenia</i>
Species	<i>Hexagenia limbata</i>

**Time-weighted average** is computed by multiplying the number of days in the sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the total number of days. A time-weighted average represents the composition of water that would be contained in a vessel or reservoir that had received equal quantities of water from the stream each day for the year.

**Tons per acre-foot** is the dry mass of dissolved solids in 1 acre-foot of water. It is computed by multiplying the concentration of the constituent, in milligrams per liter, by 0.00136.

**Tons per day (T/DAY, tons/d)** is the rate representing a mass of 1 ton of a constituent in streamflow passing a cross section in 1 day. It is equivalent to 2,000 pounds per day, or 0.9072 metric tons per day.

**Total** is the total amount of a given constituent in a representative suspended-sediment sample, regardless of the constituent's physical or chemical form. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent present in both the dissolved and suspended phases of the sample. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to judge when the results should be reported as "total." (Note that the word "total" does double duty here, indicating both that the sample consists of a suspended-sediment mixture and that the analytical method determined all of the constituent in the sample.)

**Total discharge** is the quantity of a given constituent, measured as dry mass or volume, that passes a stream cross section per unit of time. When referring to constituents other than water, this term needs to be qualified, such as "total sediment discharge," "total chloride discharge," and so on.

**Total in bottom material** is the total amount of a given constituent in a representative sample of bottom material. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to judge when the results should be reported as "total in bottom material."

**Total length** (fish) is the straight-line distance from the anterior point of a fish specimen's snout, with the mouth closed, to the posterior end of the caudal (tail) fin, with the lobes of the caudal fin squeezed together.

**Total load** refers to all of a constituent in transport. When referring to sediment, it includes suspended load plus bed load.

**Total recoverable** is the amount of a given constituent that is in solution after a representative suspended-sediment sample has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all particulate matter is not achieved by the digestion treatment, and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the dissolved and suspended phases of the sample. To achieve comparability of analytical data, equivalent digestion procedures are required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

**Turbidity** is a measurement of the collective optical properties of a water sample that cause light to be scattered and absorbed rather than transmitted in straight lines; the higher the intensity of scattered light, the higher the turbidity. Turbidity is expressed in nephelometric turbidity units (NTU) or Formazin turbidity units (FTU) depending on the method and equipment used.

**Volatile organic compounds (VOC's)** are organic compounds that can be isolated from the water phase of a sample by purging the water sample with inert gas, such as helium, and subsequently analyzed by gas chromatography. Many VOC's are manmade chemicals that are used and produced in the manufacture of paints, adhesives, petroleum products, pharmaceuticals, and refrigerants. They are often components of fuels, solvents, hydraulic fluids, paint thinners, and dry cleaning agents commonly used in urban settings. VOC contamination of drinking-water supplies is a human health concern because many are toxic and are known or suspected human carcinogens (U.S. Environmental Protection Agency, 1996).

**Water level** is the water-surface elevation or stage of the free surface of a body of water above or below any datum (see "Gage height"), or the surface of water standing in a well, usually indicative of the position of the water table or other potentiometric surface.

**Water table** is the surface of a ground-water body at which the water is at atmospheric pressure.

**Water-table aquifer** is an unconfined aquifer within which is found the water table.

**Water year** in U.S. Geological Survey reports dealing with surface-water supply is the 12-month period October 1 through September 30. The water year is designated by the calendar year in which it ends and which includes 9 of the 12 months. Thus, the year ending September 30, 1999, is called the "1999 water year."

**WDR** is used as an abbreviation for "Water-Data Report" in the REVISED RECORDS paragraph to refer to State annual hydrologic-data reports. (WRD was used as an abbreviation for "Water-Resources Data" in reports published prior to 1976.)

**Weighted average** is used in this report to indicate discharge-weighted average. It is computed by multiplying the discharge for a sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the sum of the discharges. A discharge-weighted average approximates the composition of water that would be found in a reservoir containing all the water passing a given location during the water year after thorough mixing in the reservoir.

**Well** is an excavation (pit, hole, tunnel), generally cylindrical in form and often walled in, drilled, dug, driven, bored, or jetted into the ground to such a depth as to penetrate water-yielding geologic material and allow the water to flow or to be pumped to the surface.

**Wet weight** refers to the weight of animal tissue or other substance including its contained water.

**WSP** is used as an abbreviation for "Water-Supply Paper" in reference to previously published reports

#### PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

The U.S. Geological Survey publishes a series of manuals describing procedures for planning and conducting specialized work in water-resources investigations. The material is grouped under major subject headings called books and is further divided into sections and chapters. For example, Section A of Book 3 (Applications of Hydraulics) pertains to surface water. The chapter, the unit of publication, is limited to a narrow field of subject matter. This format permits flexibility in revision and publication as the need arises.

The reports listed below are for sale by the U.S. Geological Survey, Branch of Information Services, Box 25286, Federal Center, Denver, Colorado 80225 (authorized agent of the Superintendent of Documents, Government Printing Office). Prepayment is required. Remittance should be sent by check or money order payable to the U.S. Geological Survey. Prices are not included because they are subject to change. Current prices can be obtained by writing to the above address. When ordering or inquiring about prices for any of these publications, please give the title, book number, chapter number, and "U.S. Geological Survey Techniques of Water-Resources Investigations."

#### Book 1. Collection of Water Data by Direct Measurement

##### Section D. Water Quality

- 1-D1. *Water temperature-influential factors, field measurement, and data presentation*, by H. H. Stevens, Jr., J.F. Ficke, and G. F. Smoot: USGS-TWRI Book 1, Chapter D1. 1975. 65 pages.
- 1-D2. *Guidelines for collection and field analysis of ground-water samples for selected unstable constituents*, by W.W. Wood: USGS-TWRI Book 1, Chapter D2. 1976. 24 pages.

#### Book 2. Collection of Environmental Data

##### Section D. Surface Geophysical Methods

- 2-D1. *Application of surface geophysics to ground-water investigations*, by A.A. R. Zohdy, G.P. Eaton, and D.R. Mabey: USGS-TWRI Book 2, Chapter D1. 1974. 116 pages.
- 2-D2. *Application of seismic-refraction techniques to hydrologic studies*, by F.P. Haeni: USGS-TWRI Book 2, Chapter D2. 1988. 86 pages.



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## PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS--Continued

*Section E. Subsurface Geophysical Methods*

- 2-E1. *Application of borehole geophysics to water-resources investigations*, by W.S. Keys and L.M. MacCary: USGS-TWRI Book 2, Chapter E1. 1971. 126 pages.
- 2-E2. *Borehole geophysics applied to ground-water investigations*, by W.S. Keys: USGS-TWRI Book 2, Chapter E2. 1990. 150 pages.

*Section F. Drilling and Sampling Methods*

- 2-F1. *Application of drilling, coring, and sampling techniques to test holes and wells*, by Eugene Shuter and W.E. Teasdale: USGS-TWRI Book 2, Chapter F1. 1989. 97 pages.

## Book 3. Applications of Hydraulics

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- 3-A1. *General field and office procedures for indirect discharge measurements*, by M.A. Benson and Tate Dalrymple: USGS-TWRI Book 3, Chapter A1. 1967. 30 pages.
- 3-A2. *Measurement of peak discharge by the slope-area method*, by Tate Dalrymple and M.A. Benson: USGS-TWRI Book 3, Chapter A2. 1967. 12 pages.
- 3-A3. *Measurement of peak discharge at culverts by indirect methods*, by G.L. Bodhaine: USGS-TWRI Book 3, Chapter A3. 1968. 60 pages.
- 3-A4. *Measurement of peak discharge at width contractions by indirect methods*, by H.F. Matthai: USGS-TWRI Book 3, Chapter A4. 1967. 44 pages.
- 3-A5. *Measurement of peak discharge at dams by indirect methods*, by Harry Hulsing: USGS-TWRI Book 3, Chapter A5. 1967. 29 pages.
- 3-A6. *General procedure for gaging streams*, by R.W. Carter and Jacob Davidian: USGS-TWRI Book 3, Chapter A6. 1968. 13 pages.
- 3-A7. *Stage measurement at gaging stations*, by T.J. Buchanan and W.P. Somers: USGS-TWRI Book 3, Chapter A7. 1968. 28 pages.
- 3-A8. *Discharge measurements at gaging stations*, by T.J. Buchanan and W.P. Somers: USGS-TWRI Book 3, Chapter A8. 1969. 65 pages.
- 3-A9. *Measurement of time of travel in streams by dye tracing*, by F.A. Kilpatrick and J.F. Wilson, Jr.: USGS-TWRI Book 3, Chapter A9. 1989. 27 pages.
- 3-A10. *Discharge ratings at gaging stations*, by E.J. Kennedy: USGS-TWRI Book 3, Chapter A10. 1984. 59 pages.
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- 3-A13. *Computation of continuous records of streamflow*, by E.J. Kennedy: USGS-TWRI Book 3, Chapter A13. 1983. 53 pages.
- 3-A14. *Use of flumes in measuring discharge*, by F.A. Kilpatrick and V.R. Schneider: USGS-TWRI Book 3, Chapter A14. 1983. 46 pages.
- 3-A15. *Computation of water-surface profiles in open channels*, by Jacob Davidian: USGS-TWRI Book 3, Chapter A15. 1984. 48 pages.
- 3-A16. *Measurement of discharge using tracers*, by F.A. Kilpatrick and E.D. Cobb: USGS-TWRI Book 3, Chapter A16. 1985. 52 pages.
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- 3-A19. *Levels at streamflow gaging stations*, by E.J. Kennedy: USGS-TWRI Book 3, Chapter A19. 1990. 31 pages.
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- 3-B1. *Aquifer-test design, observation, and data analysis*, by R.W. Stallman: USGS-TWRI Book 3, Chapter B1. 1971. 26 pages.
- 3-B2. *Introduction to ground-water hydraulics, a programed text for self-instruction*, by G.D. Bennett: USGS-TWRI Book 3, Chapter B2. 1976. 172 pages.
- 3-B3. *Type curves for selected problems of flow to wells in confined aquifers*, by J.E. Reed: USGS-TWRI Book 3, Chapter B3. 1980. 106 pages.
- 3-B4. *Regression modeling of ground-water flow*, by R.L. Cooley and R.L. Naff: USGS-TWRI Book 3, Chapter B4. 1990. 232 pages.
- 3-B4. *Supplement 1. Regression modeling of ground-water flow --Modifications to the computer code for nonlinear regression solution of steady-state ground-water flow problems*, by R.L. Cooley: USGS-TWRI Book 3, Chapter B4. 1993. 8 pages.
- 3-B5. *Definition of boundary and initial conditions in the analysis of saturated ground-water flow systems--An introduction*, by O.L. Franke, T.E. Reilly, and G.D. Bennett: USGS-TWRI Book 3, Chapter B5. 1987. 15 pages.
- 3-B6. *The principle of superposition and its application in ground-water hydraulics*, by T.E. Reilly, O.L. Franke, and G.D. Bennett: USGS-TWRI Book 3, Chapter B6. 1987. 28 pages.
- 3-B7. *Analytical solutions for one-, two-, and three-dimensional solute transport in ground-water systems with uniform flow*, by E.J. Wexler: USGS-TWRI Book 3, Chapter B7. 1992. 190 pages.
- 3-B8. *System and boundary conceptualization in ground-water flow simulation*, by T.E. Reilly: USGS-TWRI book 3, chap. B8. 2001. 29 p.

*Section C. Sedimentation and Erosion Techniques*

- 3-C1. *Fluvial sediment concepts*, by H.P. Guy: USGS-TWRI Book 3, Chapter C1. 1970. 55 pages.
- 3-C2. *Field methods for measurement of fluvial sediment*, by Thomas K. Edwards and G. Douglas Glysson: USGS-TWRI Book 3, Chapter C2. 1988. 80 pages.
- 3-C3. *Computation of fluvial-sediment discharge*, by George Porterfield: USGS-TWRI Book 3, Chapter C3. 1972. 66 pages.

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*Section A. Statistical Analysis*

- 4-A1. *Some statistical tools in hydrology*, by H.C. Riggs: USGS-TWRI Book 4, Chapter A1. 1968. 39 pages.
- 4-A2. *Frequency curves*, by H.C. Riggs: USGS-TWRI Book 4, Chapter A2. 1968. 15 pages.

*Section B. Surface Water*

- 4-B1. *Low-flow investigations*, by H.C. Riggs: USGS-TWRI Book 4, Chapter B1. 1972. 18 pages.
- 4-B2. *Storage analyses for water supply*, by H.C. Riggs and C.H. Hardison: USGS-TWRI Book 4, Chapter B2. 1973. 20 pages.
- 4-B3. *Regional analyses of streamflow characteristics*, by H.C. Riggs: USGS-TWRI Book 4, Chapter B3. 1973. 15 pages.

*Section D. Interrelated Phases of the Hydrologic Cycle*

- 4-D1. *Computation of rate and volume of stream depletion by wells*, by C.T. Jenkins: USGS-TWRI Book 4, Chapter D1. 1970. 17 pages.

## Book 5. Laboratory Analysis

*Section A. Water Analysis*

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## PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS--Continued

- 5-A1. *Methods for determination of inorganic substances in water and fluvial sediments*, by M.J. Fishman and L.C. Friedman, editors: USGS-TWRI Book 5, Chapter A1. 1989. 545 pages.
- 5-A2. *Determination of minor elements in water by emission spectroscopy*, by P.R. Barnett and E.C. Mallory, Jr.: USGS-TWRI Book 5, Chapter A2. 1971. 31 pages.
- 5-A3. *Methods for the determination of organic substances in water and fluvial sediments*, edited by R.L. Wershaw, M.J. Fishman, R.R. Grabbe, and L.E. Lowe: USGS-TWRI Book 5, Chapter A3. 1987. 80 pages.
- 5-A4. *Methods for collection and analysis of aquatic biological and microbiological samples*, by L.J. Britton and P.E. Greeson, editors: USGS-TWRI Book 5, Chapter A4. 1989. 363 pages.
- 5-A5. *Methods for determination of radioactive substances in water and fluvial sediments*, by L.L. Thatcher, V.J. Janzer, and K.W. Edwards: USGS-TWRI Book 5, Chapter A5. 1977. 95 pages.
- 5-A6. *Quality assurance practices for the chemical and biological analyses of water and fluvial sediments*, by L.C. Friedman and D.E. Erdmann: USGS-TWRI Book 5, Chapter A6. 1982. 181 pages.

## Section C. Sediment Analysis

- 5-C1. *Laboratory theory and methods for sediment analysis*, by H.P. Guy: USGS-TWRI Book 5, Chapter C1. 1969. 58 pages.

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## Section A. Ground Water

- 6-A1. *A modular three-dimensional finite-difference ground-water flow model*, by M.G. McDonald and A.W. Harbaugh: USGS-TWRI Book 6, Chapter A1. 1988. 586 pages.
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- 6-A4. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 2: Derivation of finite-element equations and comparisons with analytical solutions*, by R.L. Cooley: USGS-TWRI Book 6, Chapter A4. 1992. 108 pages.
- 6-A5. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 3: Design philosophy and programming details*, by L.J. Torak: USGS-TWRI Book 6, Chapter A5. 1993. 243 pages.
- 6-A6. *A coupled surface-water and ground-water flow model (MODBRANCH) for simulation of stream-aquifer interaction*, by Eric D. Swain and Eliezer J. Wexler. 1996. 125 pages.

## Book 7. Automated Data Processing and Computations

## Section C. Computer Programs

- 7-C1. *Finite difference model for aquifer simulation in two dimensions with results of numerical experiments*, by P.C. Trescott, G.F. Pinder, and S.P. Larson: USGS-TWRI Book 7, Chapter C1. 1976. 116 pages.
- 7-C2. *Computer model of two-dimensional solute transport and dispersion in ground water*, by L.F. Konikow and J.D. Bredehoeft: USGS-TWRI Book 7, Chapter C2. 1978. 90 pages.
- 7-C3. *A model for simulation of flow in singular and interconnected channels*, by R.W. Schaffranek, R.A. Baltzer, and D.E. Goldberg: USGS-TWRI Book 7, Chapter C3. 1981. 110 pages.

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## Book 8. Instrumentation

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- 8-A1. *Methods of measuring water levels in deep wells*, by M.S. Garber and F.C. Koopman: USGS-TWRI Book 8, Chapter A1. 1968. 23 pages.
- 8-A2. *Installation and service manual for U.S. Geological Survey manometers*, by J.D. Craig: USGS-TWRI Book 8, Chapter A2. 1983. 57 pages.

*Section B. Instruments for Measurement of Discharge*

- 8-B2. *Calibration and maintenance of vertical-axis type current meters*, by G.F. Smoot and C.E. Novak: USGS-TWRI Book 8, Chapter B2. 1968. 15 pages.

## Book 9. Handbooks for Water-Resources Investigations

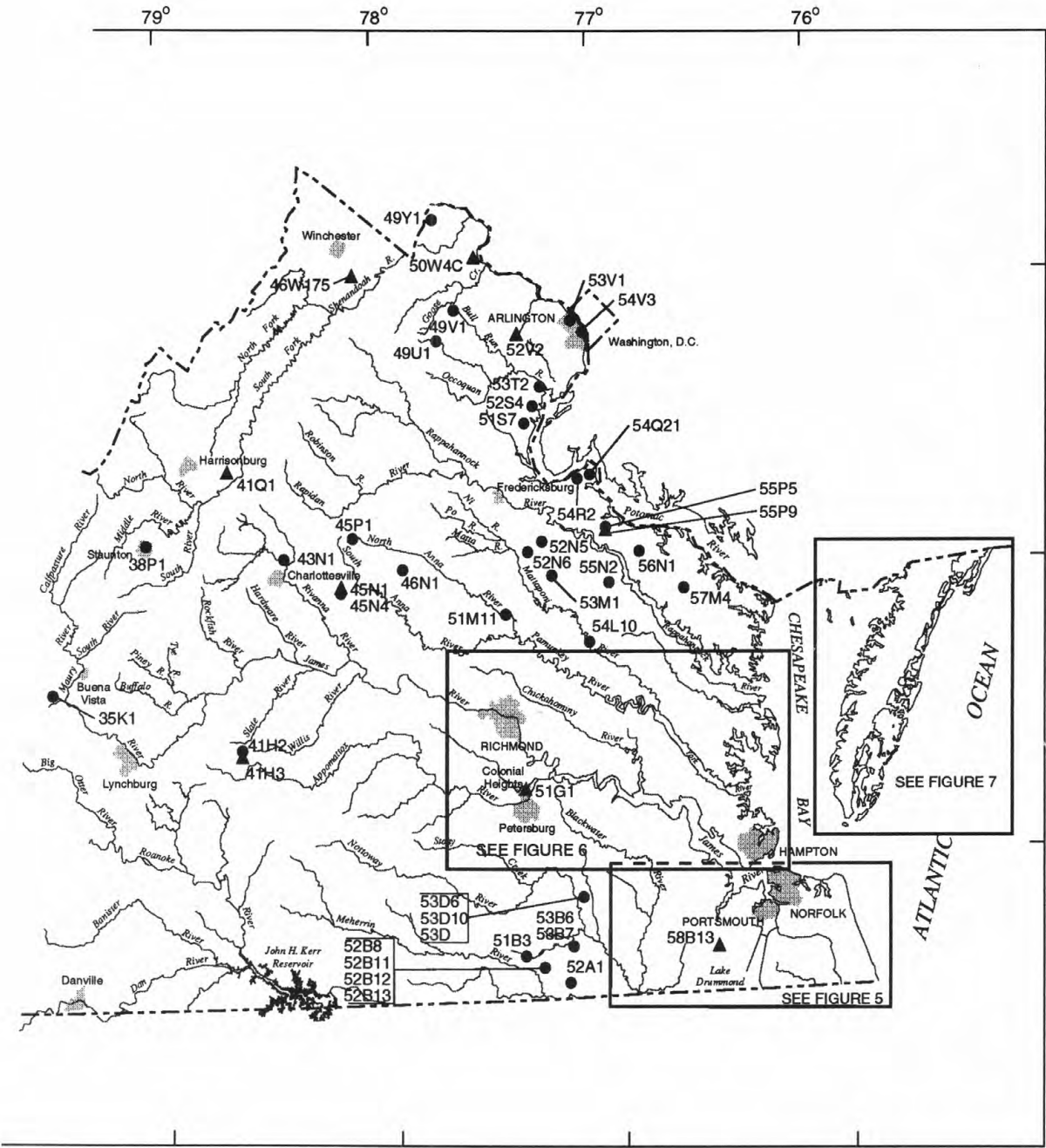
*Section A. National Field Manual for the Collection of Water-Quality Data*

- 9-A1. *National Field Manual for the Collection of Water-Quality Data: Preparations for Water Sampling*, by F.D. Wilde, D.B. Radtke, Jacob Gibbs, and R.T. Iwatsubo: USGS-TWRI book 9, chap. A1. 1998. 47 p.
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- 9-A6. *National Field Manual for the Collection of Water-Quality Data: Field Measurements*, edited by F.D. Wilde and D.B. Radtke: USGS-TWRI Book 9, Chapter A6. 1998. Variously paginated.
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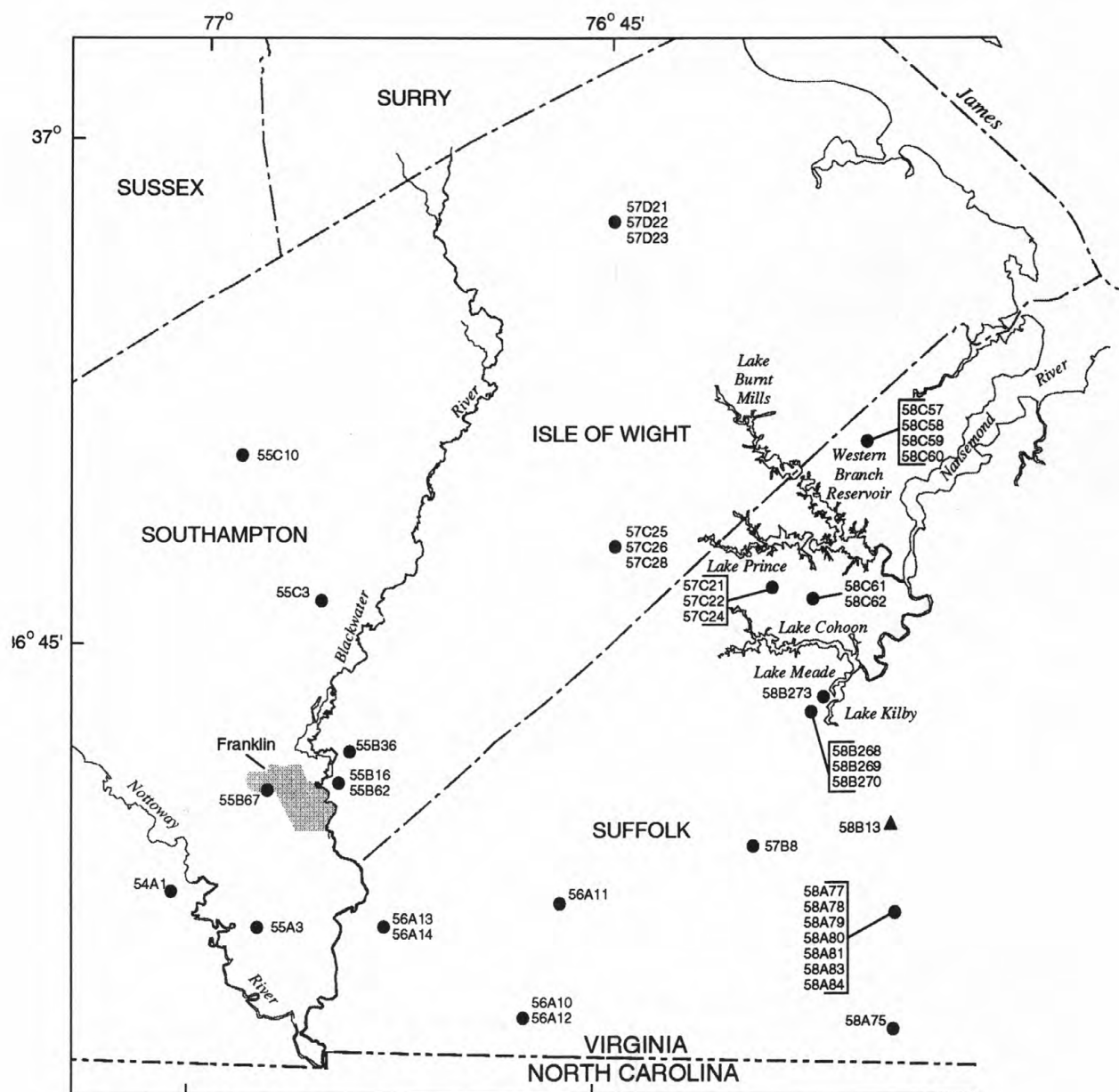
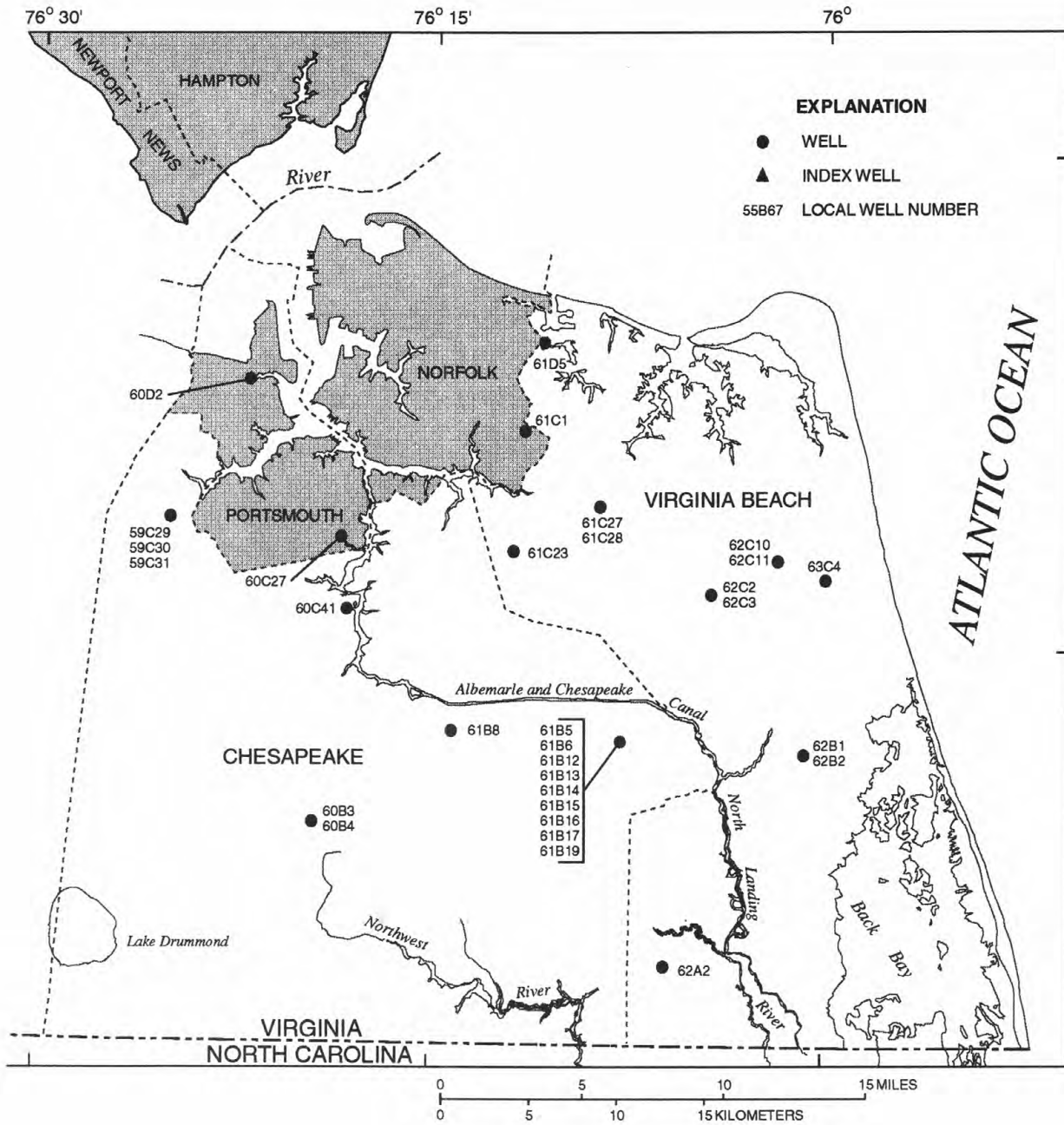


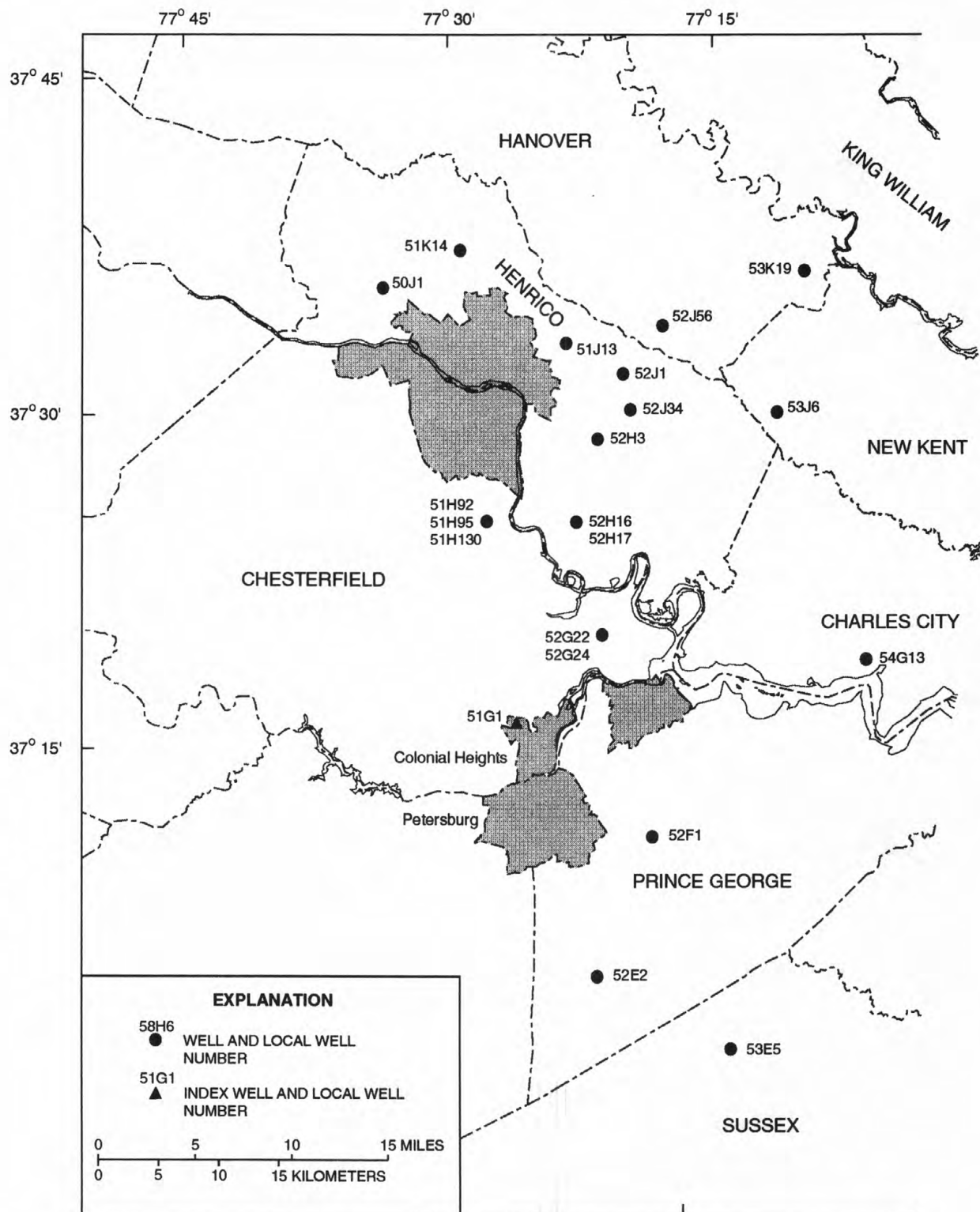
Figure 5. Location of ground-water observation wells in southeastern Virginia.

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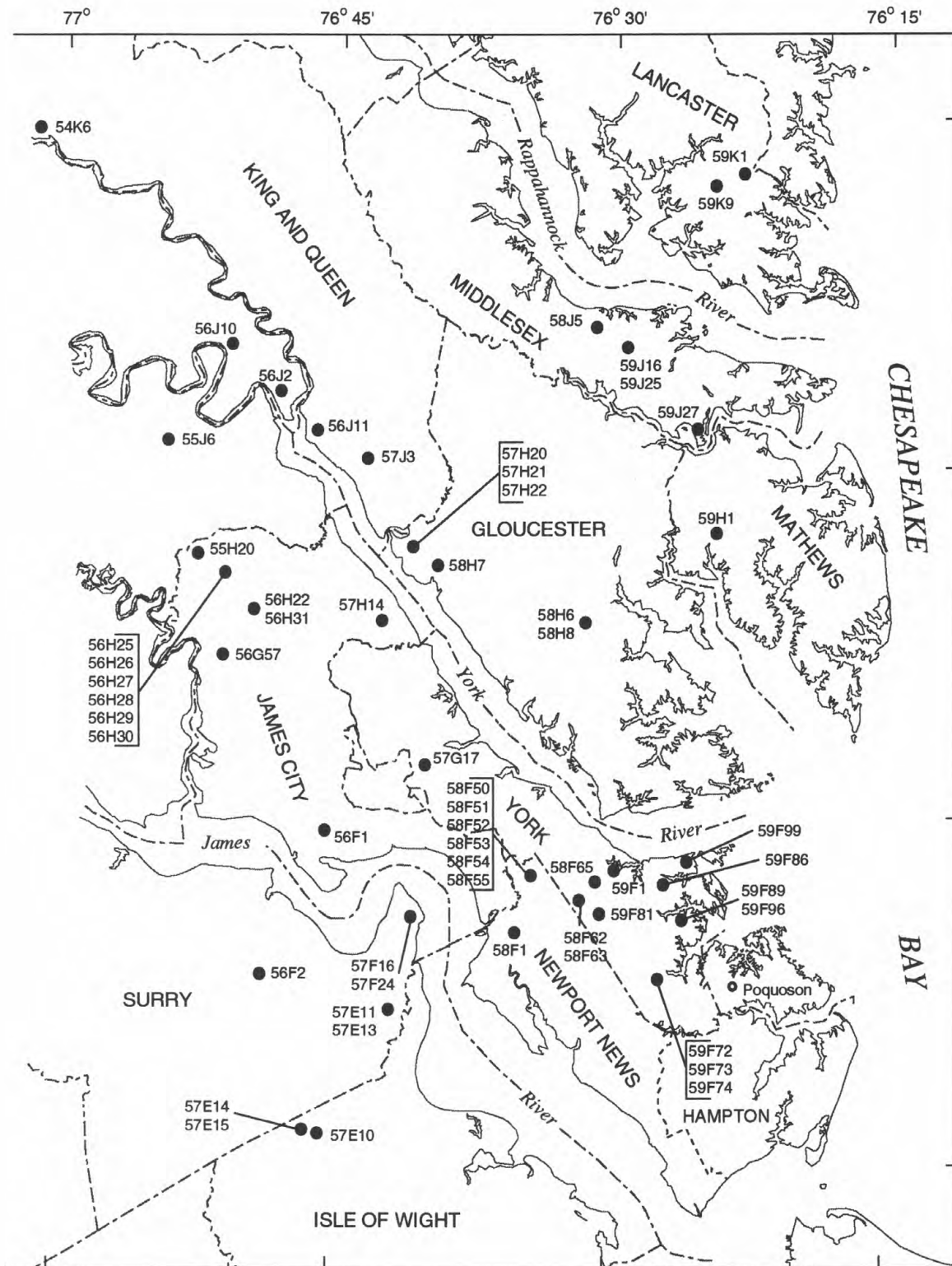


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**Figure 6.** Location of ground-water observation wells on York-James peninsula and vicinity.





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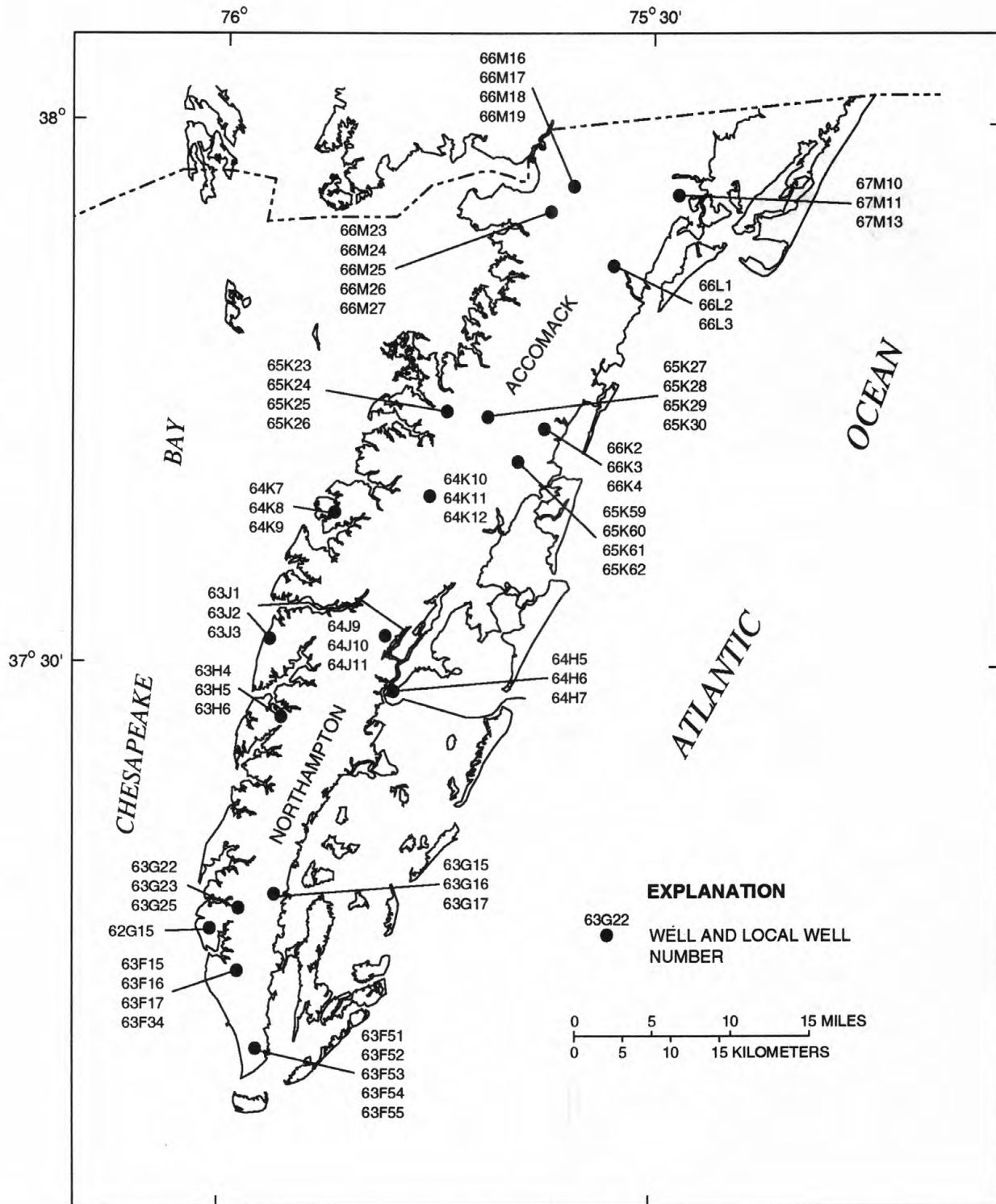


Figure 7. Location of ground-water observation wells on Delmarva peninsula.

GROUND-WATER-LEVEL RECORDS

## GROUND-WATER LEVELS

## ACCOMACK COUNTY

372922076470101. Local number, 64H 5 SOW 102C.

**LOCATION.**--Lat 37°29'21", long 75°47'04", NAD83, Hydrologic Unit 02080110, at entrance to Virginia Landing, 0.2 mi south from end of State Highway 605, 2.0 mi southeast of Willis Wharf, and 5.2 mi southwest of intersection of State Highways 605 and 182. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Yorktown-Eastover aquifer of Miocene-Pliocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 306 ft, screened 296 to 306 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Nov. 13, 1985, to July 24, 1995, bimonthly measurement with chalked tape. Prior to Nov. 13, 1985, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 6 ft above sea level, from topographic map. Measuring point: Top of casing, 0.3 ft above land-surface datum prior to Mar. 1, 1988; 1.1 ft thereafter.

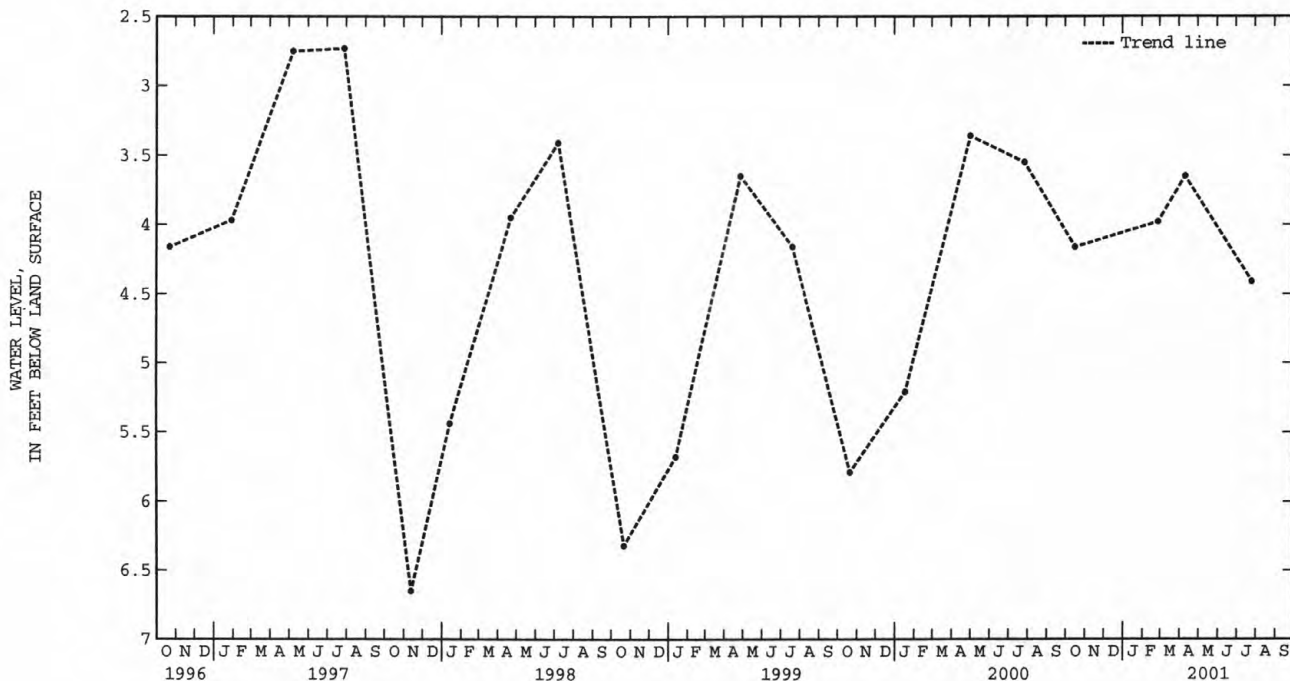
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Water from this well is known to contain concentrations of dissolved solids greater than 1,000 mg/L.

**PERIOD OF RECORD.**--June 1977 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 0.70 ft below land-surface datum, June 6, 1984; lowest measured, 7.35 ft below land-surface datum, Nov. 1, 1977.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16	4.16	FEB 26	3.98	APR 10	3.65	JUL 26	4.41
WATER YEAR 2001		HIGHEST	3.65	APR 10, 2001		LOWEST	4.41 JUL 26, 2001





## GROUND-WATER LEVELS

37

## ACCOMACK COUNTY

372905075474002. Local number, 64H 6 SOW 102A.

**LOCATION.**--Lat 37°29'21", long 75°47'04", NAD83, Hydrologic Unit 02080110, at entrance to Virginia Landing, 0.2 mi south from end of State Highway 605, 2.0 mi southeast of Willis Wharf, and 5.2 mi southwest of intersection of State Highways 605 and 182. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Yorktown-Eastover aquifer of Miocene-Pliocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 154 ft, screened 144 to 154 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Nov. 13, 1985, to Jul. 24, 1995, bimonthly measurement with chalked tape. Prior to Nov. 13, 1985, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 6 ft above sea level, from topographic map. Measuring point: Top of casing, 0.7 ft above land-surface datum.

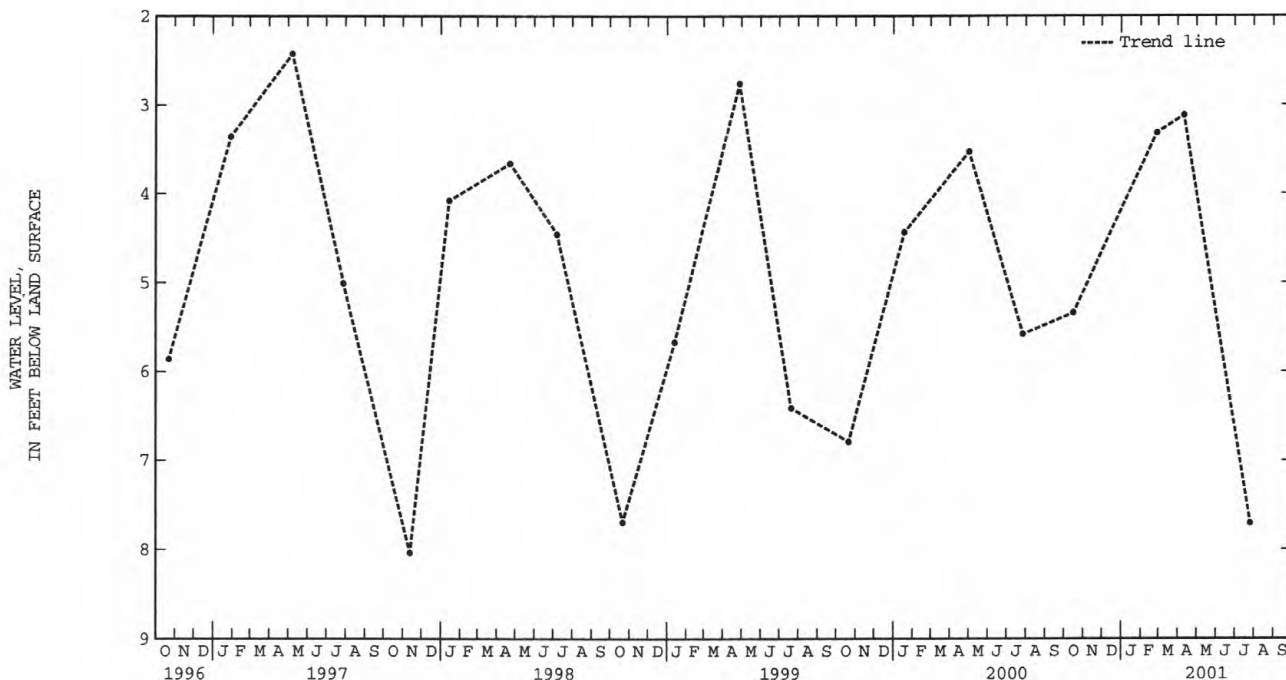
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division.

**PERIOD OF RECORD.**--June 1977 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 0.33 ft below land-surface datum, Oct. 30, 1984; lowest measured, 9.63 ft below land-surface datum, Sep. 1, 1977.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16	5.34	FEB 26	3.32	APR 10	3.12	JUL 26	7.71
WATER YEAR 2001		HIGHEST	3.12	APR 10, 2001		LOWEST	7.71 JUL 26, 2001



## GROUND-WATER LEVELS

## ACCOMACK COUNTY

372905075474001. Local number, 64H 7 SOW 102B.

**LOCATION.**--Lat 37°29'21", long 75°47'04", NAD83, Hydrologic Unit 02080110, at entrance to Virginia Landing, 0.2 mi south from end of State Highway 605, 2.0 mi southeast of Willis Wharf, and 5.2 mi southwest of intersection of State Highways 605 and 182. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Yorktown-Eastover aquifer of Miocene-Pliocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 220 ft, screened 210 to 220 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Nov. 13, 1985, to Jul. 24, 1995, bimonthly measurement with chalked tape. Prior to Nov. 13, 1985, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 6 ft above sea level, from topographic map. Measuring point: Top of casing, 0.8 ft above land-surface datum.

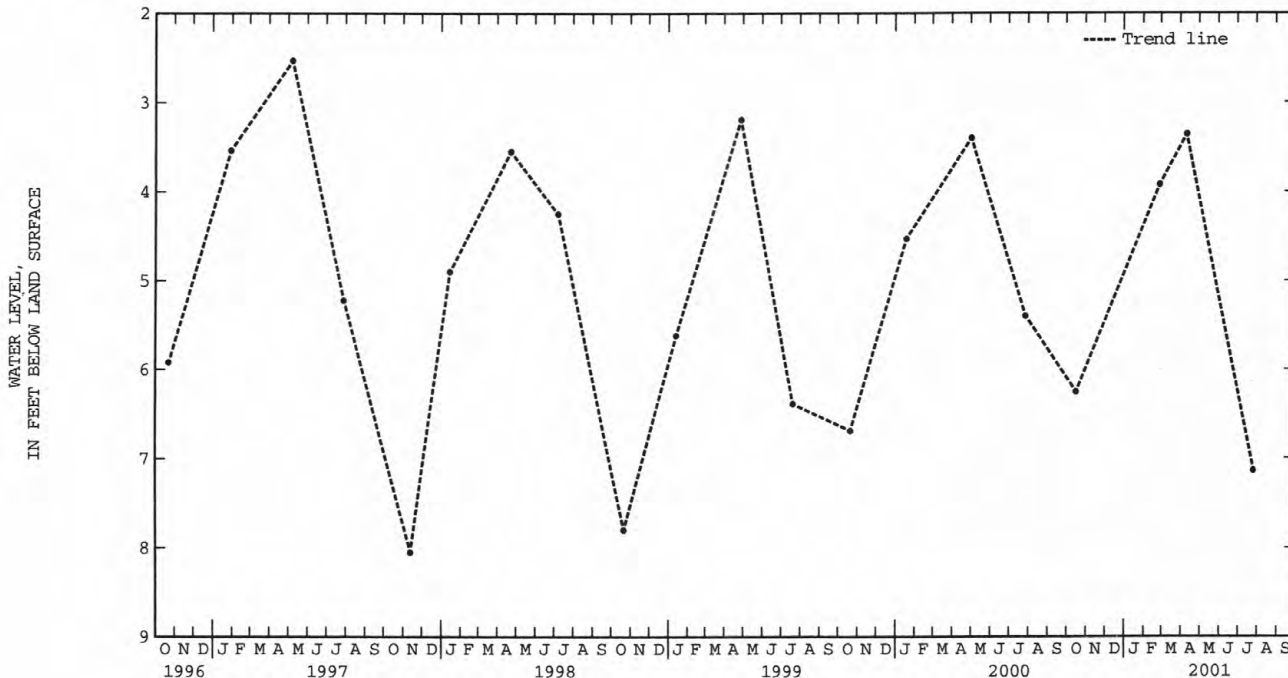
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division.

**PERIOD OF RECORD.**--June 1977 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 1.19 ft below land-surface datum, Jul. 10, 1984; lowest measured, 8.76 ft below land-surface datum, Nov. 1, 1978.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16	6.26	FEB 26	3.92	APR 10	3.36	JUL 26	7.14
WATER YEAR 2001		HIGHEST	3.36	APR 10, 2001	LOWEST	7.14	JUL 26, 2001



## GROUND-WATER LEVELS

39

## ACCOMACK COUNTY

373845075522501. Local number, 64K 7 SOW 106C.

**LOCATION.**--Lat 37°38'45", long 75°52'24", NAD83, Hydrologic Unit 02080109, 100 ft north of State Highway 633, 0.3 mi northwest of intersection of State Highways 631 and 633, and 0.3 mi northwest of Hacksneck. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Yorktown-Eastover aquifer of Miocene-Pliocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 176 ft, screened 166 to 176 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to Jul. 20, 1995, bimonthly measurement with chalked tape. Prior to Oct. 1, 1985, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 3 ft above sea level, from topographic map. Measuring point: Top of casing, 0.73 ft above land-surface datum.

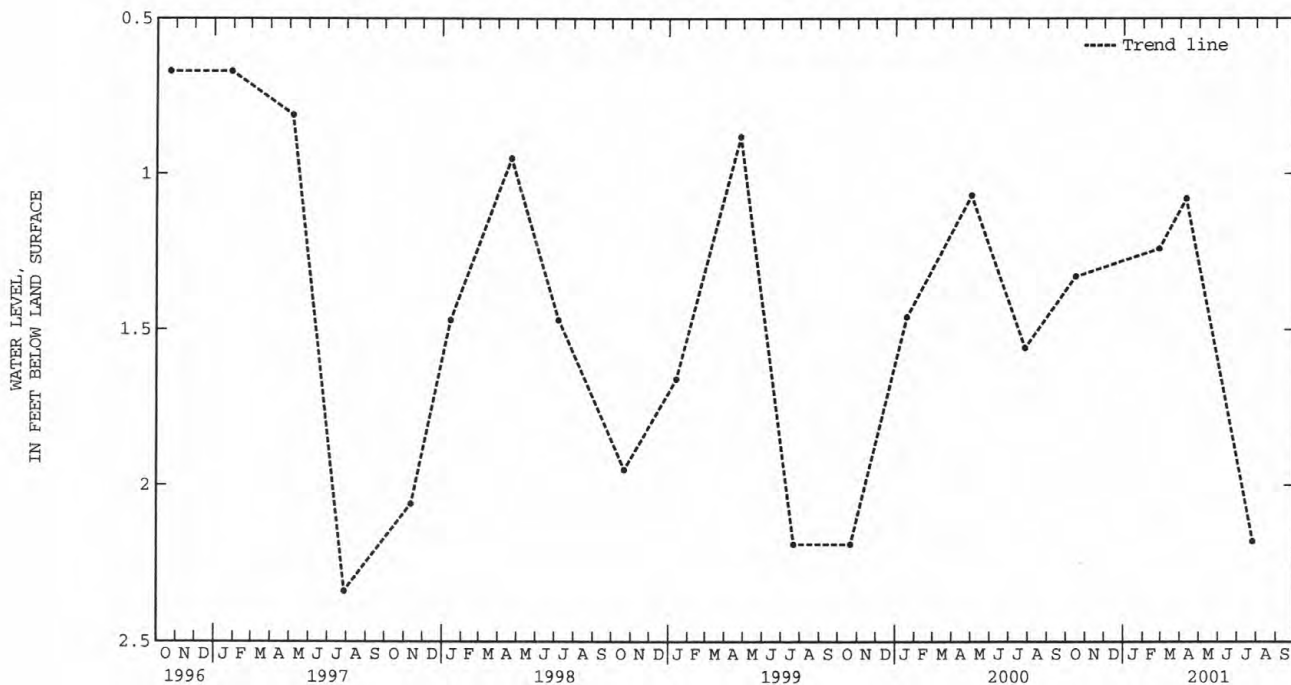
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division.

**PERIOD OF RECORD.**--October 1977 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 0.31 ft below land-surface datum, May 22, 1991; lowest measured, 2.35 ft below land-surface datum, Jul. 16, 1986.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16	1.33	FEB 26	1.24	APR 10	1.08	JUL 26	2.18
WATER YEAR 2001		HIGHEST	1.08	APR 10, 2001	LOWEST	2.18	JUL 26, 2001



## GROUND-WATER LEVELS

## ACCOMACK COUNTY

373845075522503. Local number, 64K 8 SOW 106B.

**LOCATION.**--Lat 37°38'45", long 75°52'24", NAD83, Hydrologic Unit 02080109, 100 ft north of State Highway 633, 0.3 mi northwest of intersection of State Highways 631 and 633, and 0.3 mi northwest of Hacksneck. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Yorktown-Eastover aquifer of Miocene-Pliocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 95 ft, screened 85 to 95 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to Jul. 20, 1995, bimonthly measurement with chalked tape. Prior to Oct. 1, 1985, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 3 ft above sea level, from topographic map. Measuring point: Top of casing, 0.7 ft above land-surface datum.

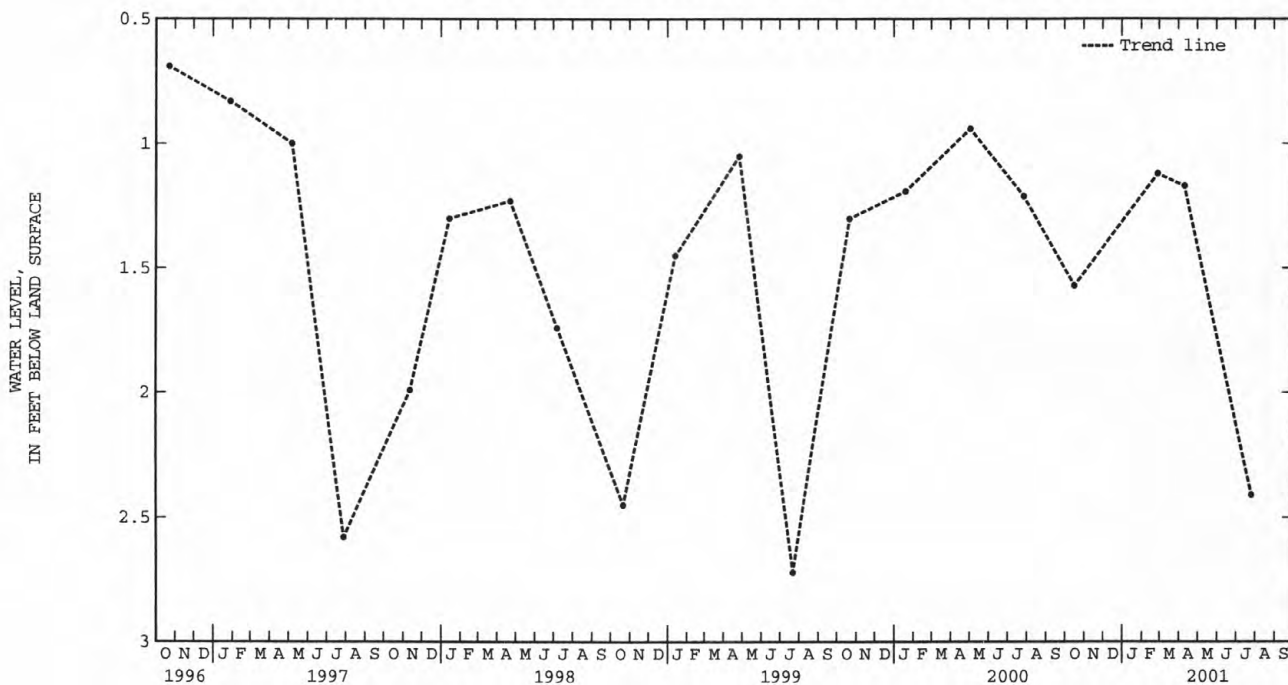
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality. - Water Division.

**PERIOD OF RECORD.**--October 1977 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 0.69 ft below land-surface datum, Oct. 22, 1996; lowest measured, 2.92 ft below land-surface datum, Sep. 2, 1993.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16	1.57	FEB 26	1.12	APR 10	1.17	JUL 26	2.41
WATER YEAR 2001		HIGHEST	1.12	FEB 26, 2001	LOWEST	2.41	JUL 26, 2001





## GROUND-WATER LEVELS

41

## ACCOMACK COUNTY

373845075522502. Local number, 64K 9 SOW 106A.

**LOCATION.**--Lat 37°38'45", long 75°52'24", NAD83, Hydrologic Unit 02080109, 100 ft north of State Highway 633, 0.3 mi northwest of intersection of State Highways 631 and 633, and 0.3 mi northwest of Hacksneck. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Columbia aquifer of Quaternary age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 37 ft, screened 27 to 37 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to Jul. 20, 1995, bimonthly measurement with chalked tape. Prior to Oct. 1, 1985, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is approximately 3 ft above sea level, from topographic map. Measuring point: Top of casing, 1.2 ft above land-surface datum.

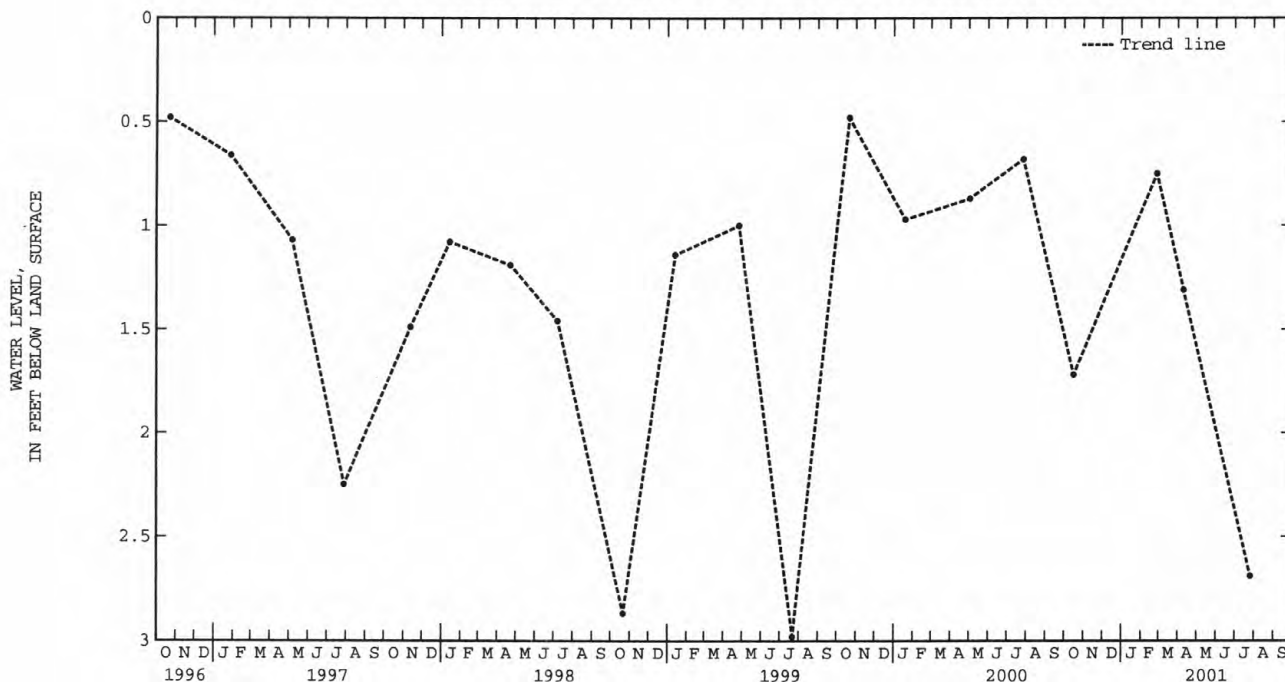
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division.

**PERIOD OF RECORD.**--October 1977 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 0.32 ft below land-surface datum, Feb. 24, 1994; lowest measured, 3.46 ft below land-surface datum, Sep. 14, 1987.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16	1.72	FEB 26	.75	APR 10	1.31	JUL 26	2.69
WATER YEAR 2001		HIGHEST	.75	FEB 26, 2001		LOWEST	2.69 JUL 26, 2001



## GROUND-WATER LEVELS

## ACCOMACK COUNTY

373932075452701. Local number, 64K 10 SOW 108A.

**LOCATION.**--Lat 37°39'32", long 75°45'26", NAD83, Hydrologic Unit 02080109, 200 ft east of State Highway 609, 0.2 mi southeast of intersection of State Highways 609 and 627, and 0.9 mi northwest of Melfa. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Columbia aquifer of Quaternary age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 50 ft, screened 40 to 50 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to Jul. 20, 1995, bimonthly measurement with chalked tape. Prior to Oct. 1, 1985, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 47 ft above sea level, from topographic map. Measuring point: Top of casing, 0.22 ft above land-surface datum prior to Mar. 1, 1988; 0.75 ft thereafter.

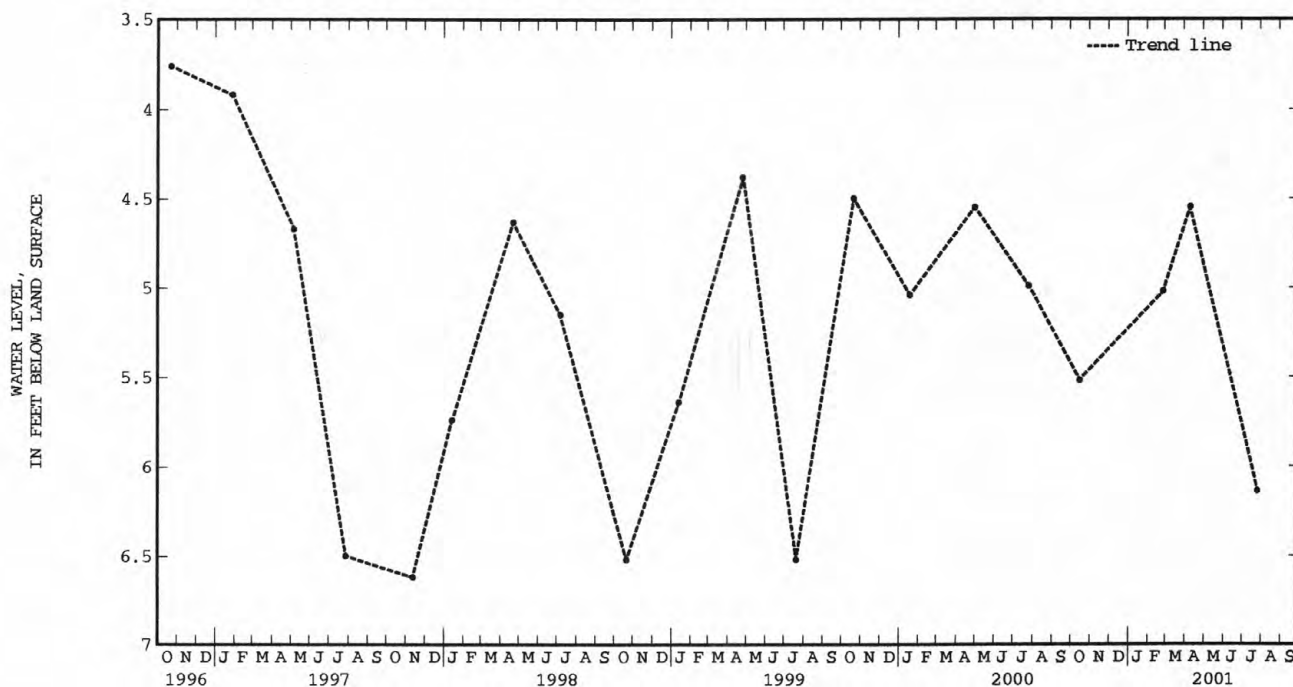
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division.

**PERIOD OF RECORD.**--September 1978 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 2.98 ft below land-surface datum, Apr. 21, 1983; lowest measured, 15.06 ft below land-surface datum, Jan. 30, 1985.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16	5.52	FEB 26	5.02	APR 10	4.55	JUL 26	6.14
WATER YEAR 2001		HIGHEST	4.55	APR 10, 2001	LOWEST	6.14	JUL 26, 2001



## GROUND-WATER LEVELS

43

## ACCOMACK COUNTY

373932075452702. Local number, 64K 11 SOW 108B.

**LOCATION.**--Lat 37°39'32", long 75°45'26", NAD83, Hydrologic Unit 02080109, 200 ft east of State Highway 609, 0.2 mi southeast of intersection of State Highways 609 and 627, and 0.9 mi northwest of Melfa. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Yorktown-Eastover aquifer of Miocene-Pliocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 180 ft, screened 170 to 180 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to Jul. 20, 1995, bimonthly measurement with chalked tape. Prior to Oct. 1, 1985, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 47 ft above sea level, from topographic map. Measuring point: Top of casing, 1.0 ft above land-surface datum.

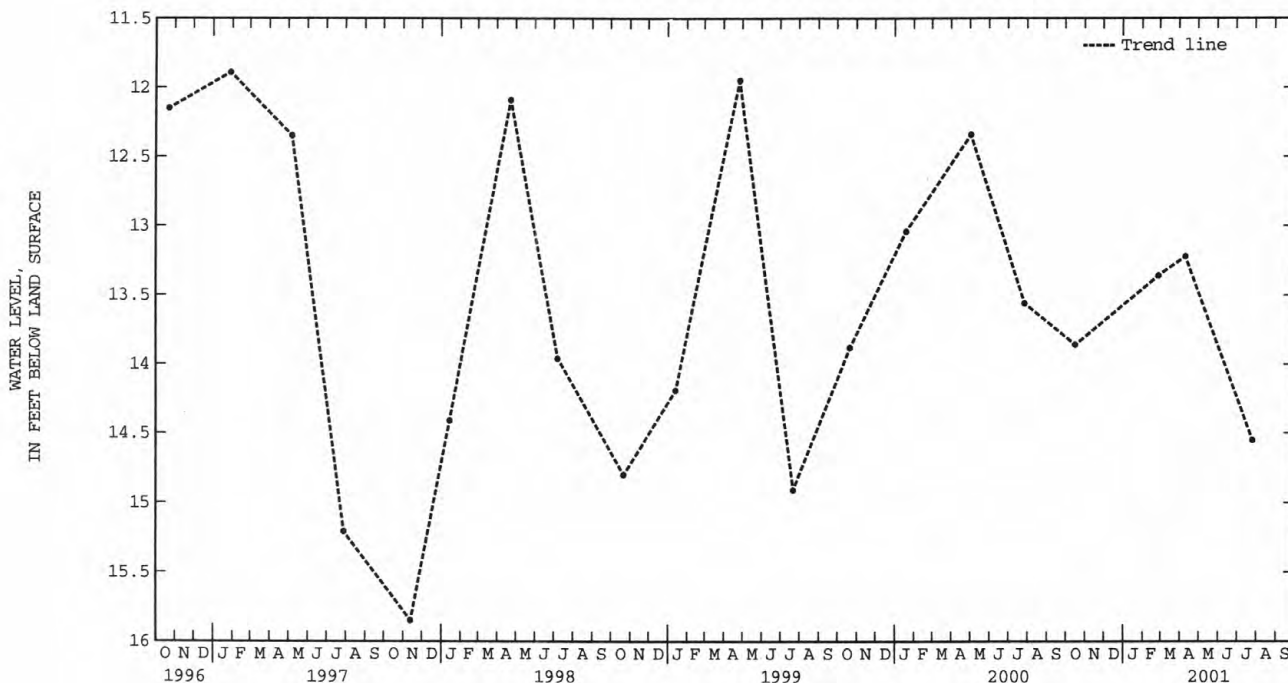
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division.

**PERIOD OF RECORD.**--September 1978 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 11.03 ft below land-surface datum, Aug. 1, 1979; lowest measured, 16.50 ft below land-surface datum, Oct. 23, 1995.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16	13.86	FEB 26	13.36	APR 10	13.22	JUL 26	14.55
WATER YEAR 2001		HIGHEST	13.22	APR 10, 2001		LOWEST	14.55
							JUL 26, 2001



## GROUND-WATER LEVELS

## ACCOMACK COUNTY

373932075452703. Local number, 64K 12 SOW 108C.

**LOCATION.**--Lat 37°39'32", long 75°45'26", NAD83, Hydrologic Unit 02080109, 200 ft east of State Highway 609, 0.2 mi southeast of intersection of State Highways 609 and 627, and 0.9 mi northwest of Melfa. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Yorktown-Eastover aquifer of Miocene-Pliocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 284 ft, screened 274 to 284 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to Jul. 20, 1995, bimonthly measurement with chalked tape. Prior to Oct. 1, 1985, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 47 ft above sea level, from topographic map. Measuring point: Top of casing, 0.5 ft above land-surface datum.

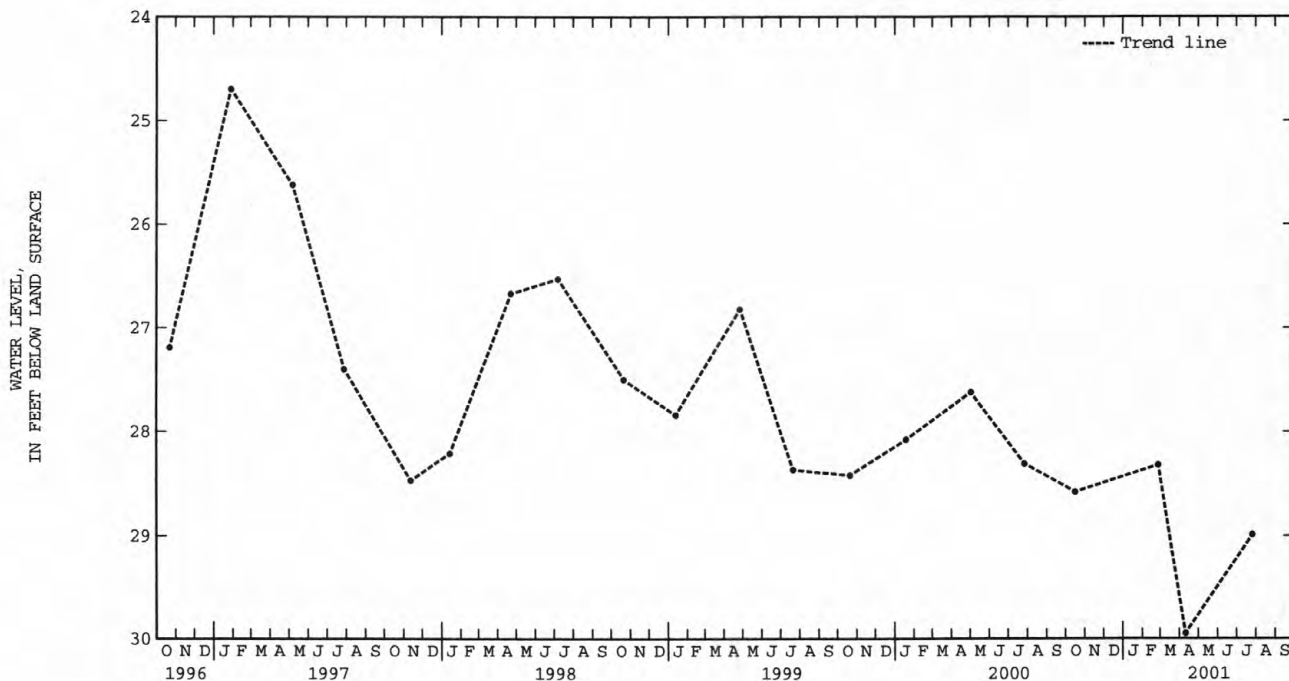
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level may be affected by local pumpage.

**PERIOD OF RECORD.**--September 1978 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 14.50 ft below land-surface datum, Feb. 2, 1984; lowest measured, 30.12 ft below land-surface datum, Jan. 30, 1996.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16	28.58	FEB 26	28.32	APR 10	29.95	JUL 26	28.99
WATER YEAR 2001		HIGHEST	28.32	FEB 26, 2001	LOWEST	29.95	APR 10, 2001





## GROUND-WATER LEVELS

45

## ACCOMACK COUNTY

374442075432501. Local number, 65K 23 SOW 109C.

**LOCATION.**--Lat 37°44'42", long 75°43'24", NAD83, Hydrologic Unit 02080109, 50 ft north of State Highway 658, 0.1 mi northeast of intersection of State Highways 658 and 660, and 2.2 mi southeast of Deep Creek. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Yorktown-Eastover aquifer of Miocene-Pliocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 290 ft, screened 280 to 290 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to Jul. 20, 1995, bimonthly measurement with chalked tape. Prior to Oct. 1, 1985, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 13 ft above sea level, from topographic map. Measuring point: Top of casing, 0.3 ft above land-surface datum.

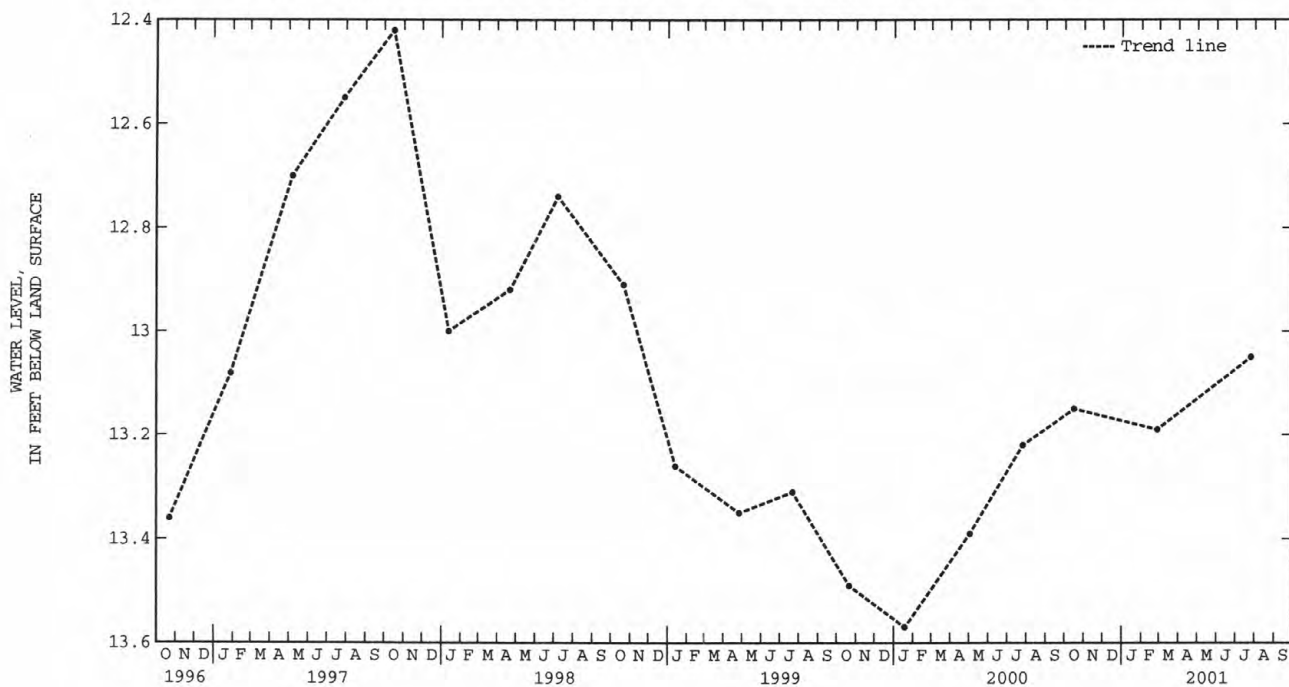
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level may be affected by local pumpage.

**PERIOD OF RECORD.**--June 1978 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 11.36 ft below land-surface datum, Dec. 30, 1982; lowest measured, 16.65 ft below land-surface datum, Mar. 12, 1980.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL		
OCT 16	13.15	FEB 26	13.19	JUL 26	13.05		
WATER YEAR 2001		HIGHEST	13.05	JUL 26, 2001	LOWEST	13.19	FEB 26, 2001



## GROUND-WATER LEVELS

## ACCOMACK COUNTY

374442075432502. Local number, 65K 24 SOW 109A.

**LOCATION.**--Lat 37°44'42", long 75°43'24", NAD83, Hydrologic Unit 02080109, 50 ft north of State Highway 658, 0.1 mi northeast of intersection of State Highways 658 and 660, and 2.2 mi southeast of Deep Creek. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Yorktown-Eastover aquifer of Miocene-Pliocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 130 ft, screened 120 to 130 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to Jul. 20, 1995, bimonthly measurement with chalked tape. Prior to Oct. 1, 1985, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 13 ft above sea level, from topographic map. Measuring point: Top of casing, 0.8 ft above land-surface datum.

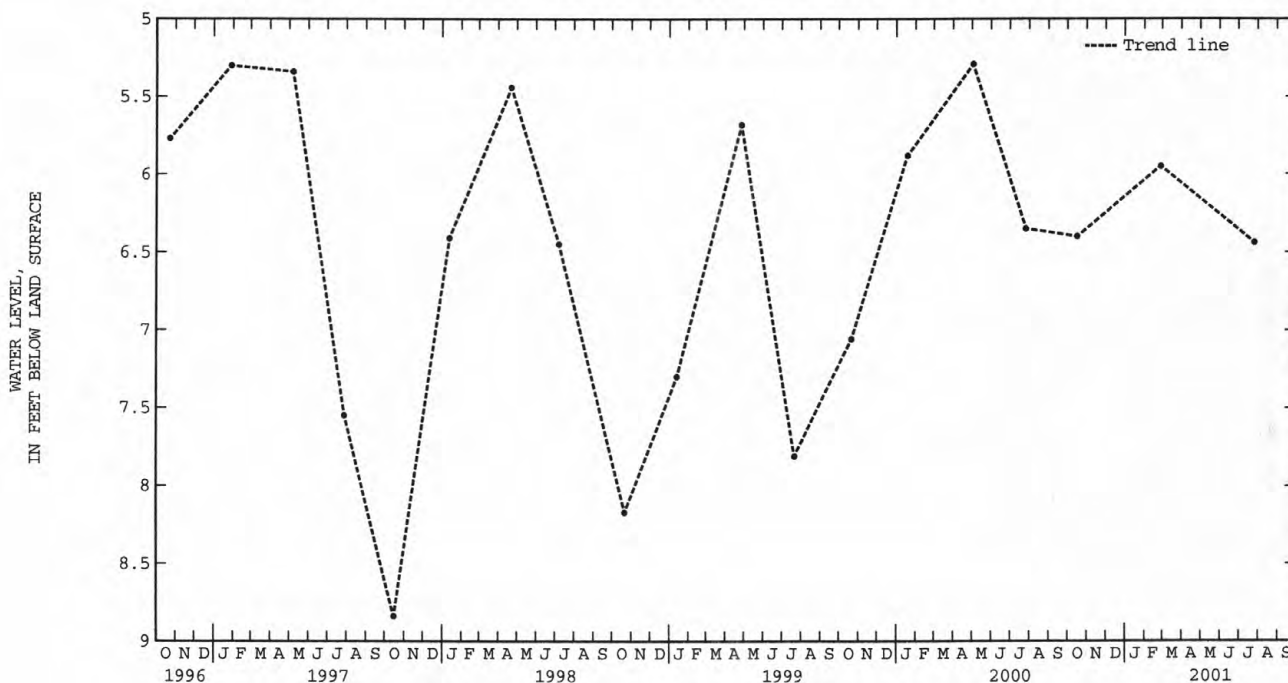
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division.

**PERIOD OF RECORD.**--June 1978 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 4.35 ft below land-surface datum, Apr. 21, 1983; lowest measured, 9.27 ft below land-surface datum, Oct. 23, 1995.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL		
OCT 16	6.40	FEB 26	5.95	JUL 26	6.44		
WATER YEAR 2001		HIGHEST	5.95	FEB 26, 2001	LOWEST	6.44	JUL 26, 2001



## GROUND-WATER LEVELS

47

## ACCOMACK COUNTY

374442075432503. Local number, 65K 25 SOW 109B.

**LOCATION.**--Lat 37°44'42", long 75°43'24", NAD83, Hydrologic Unit 02080109, 50 ft north of State Highway 658, 0.1 mi northeast of intersection of State Highways 658 and 660, and 2.2 mi southeast of Deep Creek. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Yorktown-Eastover aquifer of Miocene-Pliocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 228 ft, screened 218 to 228 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to Jul. 20, 1995, bimonthly measurement with chalked tape. Prior to Oct. 1, 1985, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 13 ft above sea level, from topographic map. Measuring point: Top of casing, 0.85 ft above land-surface datum.

**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

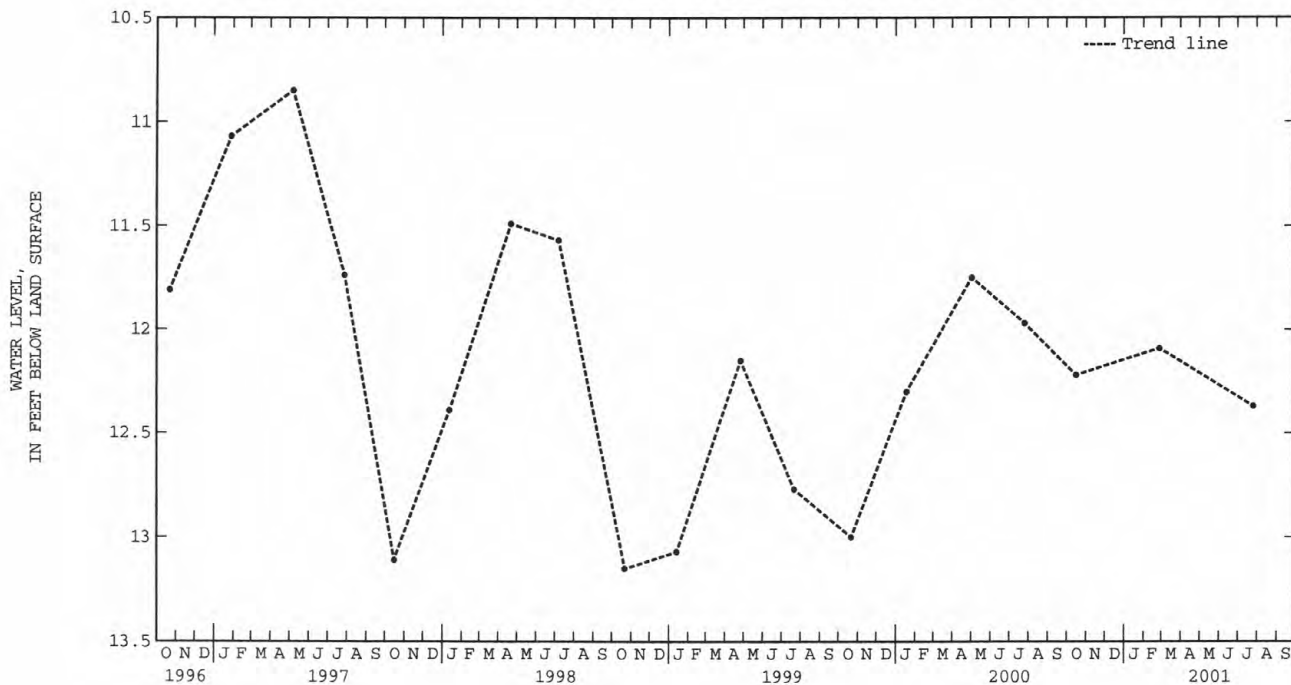
**PERIOD OF RECORD.**--June 1978 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 10.15 ft below land-surface datum, Jun. 20, 1984; lowest measured, 14.34 ft below land-surface datum, Sep. 10, 1991.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16	12.22	FEB 26	12.09	JUL 26	12.37

WATER YEAR 2001	HIGHEST	12.09	FEB 26, 2001	LOWEST	12.37	JUL 26, 2001
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## GROUND-WATER LEVELS

## ACCOMACK COUNTY

374442075432504. Local number, 65K 26 SOW 109S.

**LOCATION.**--Lat 37°44'42", long 75°43'24", NAD83, Hydrologic Unit 02080109, 50 ft north of State Highway 658, 0.1 mi northeast of intersection of State Highways 658 and 660, and 2.2 mi southeast of Deep Creek. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Columbia aquifer of Quaternary age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 25 ft, screened 15 to 25 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to Jul. 20, 1995, bimonthly measurement with chalked tape. Prior to Oct. 1, 1985, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 13 ft above sea level, from topographic map. Measuring point: Top of casing, 0.37 ft above land-surface datum prior to Mar. 1, 1988; 0.5 ft thereafter.

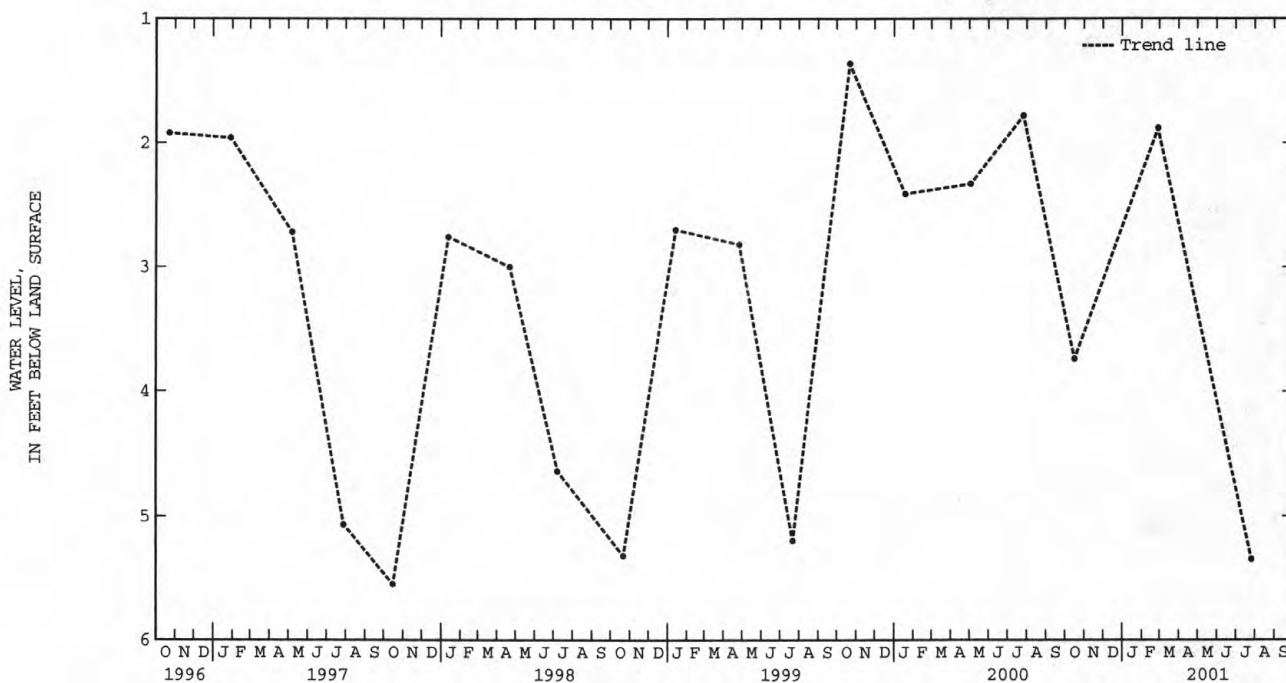
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division.

**PERIOD OF RECORD.**--June 1978 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 1.03 ft below land-surface datum, Feb. 24, 1994; lowest measured, 6.57 ft below land-surface datum, Oct. 31, 1978.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL		
OCT 16	3.74	FEB 26	1.88	JUL 26	5.35		
WATER YEAR 2001		HIGHEST	1.88	FEB 26, 2001	LOWEST	5.35	JUL 26, 2001





## 49

374425075400001. Local number, 65K 27 SOW 114A.

**AQUIFER.**--Yorktown-Eastover aquifer of Miocene-Pliocene age.

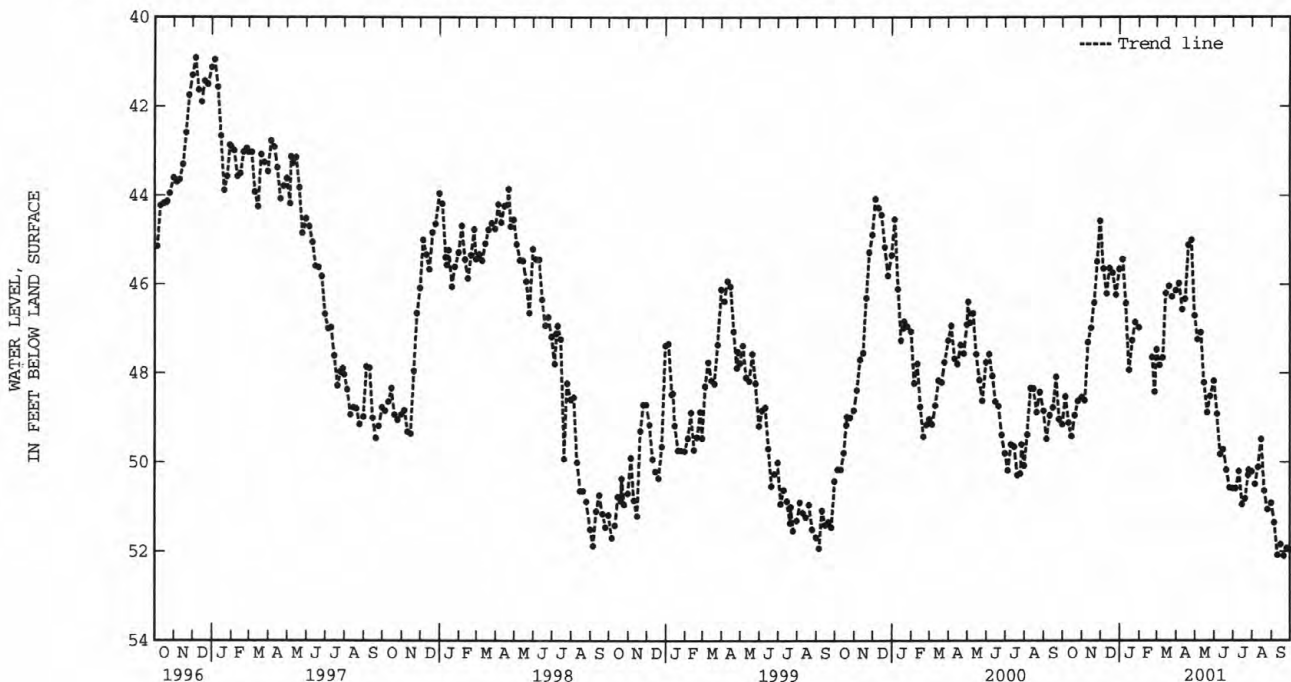
**INSTRUMENTATION.**--Continuous strip-chart recorder. Prior to Jul. 20, 1985, occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel.

**REMARKS.**---Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 34.59 ft below land-surface datum, Jun. 6, 1984; lowest measured, 52.57 ft below land-surface datum, Sep. 23, 2001.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

WATER YEAR 2001	HIGHEST	44.57	NOV 30, 2000	LOWEST	52.10	SEP 20, 2001
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## GROUND-WATER LEVELS

**ACCOMACK COUNTY**

374425075400002. Local number, 65K 28 SOW 114B.

**LOCATION.**--Lat 37°44'25", long 75°39'59", NAD83, Hydrologic Unit 02080109, 0.2 mi northwest of intersection of State Highway 662 and U.S. Highway 13, 0.6 mi northwest of State Highway 662, and 0.9 mi east of Greenbush. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Yorktown-Eastover aquifer of Miocene-Pliocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 230 ft, screened 220 to 230 ft.

**INSTRUMENTATION.**--Continuous strip-chart recorder. Prior to Jul. 20, 1985, occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel.

**DATUM.**--Elevation of land-surface datum is 45 ft above sea level, from topographic map. Measuring point: Top of recorder shelf, 1.5 ft above land-surface datum.

**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Missing record due to recorder malfunction. Water level affected by local pumpage.

**PERIOD OF RECORD.**--March 1980 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

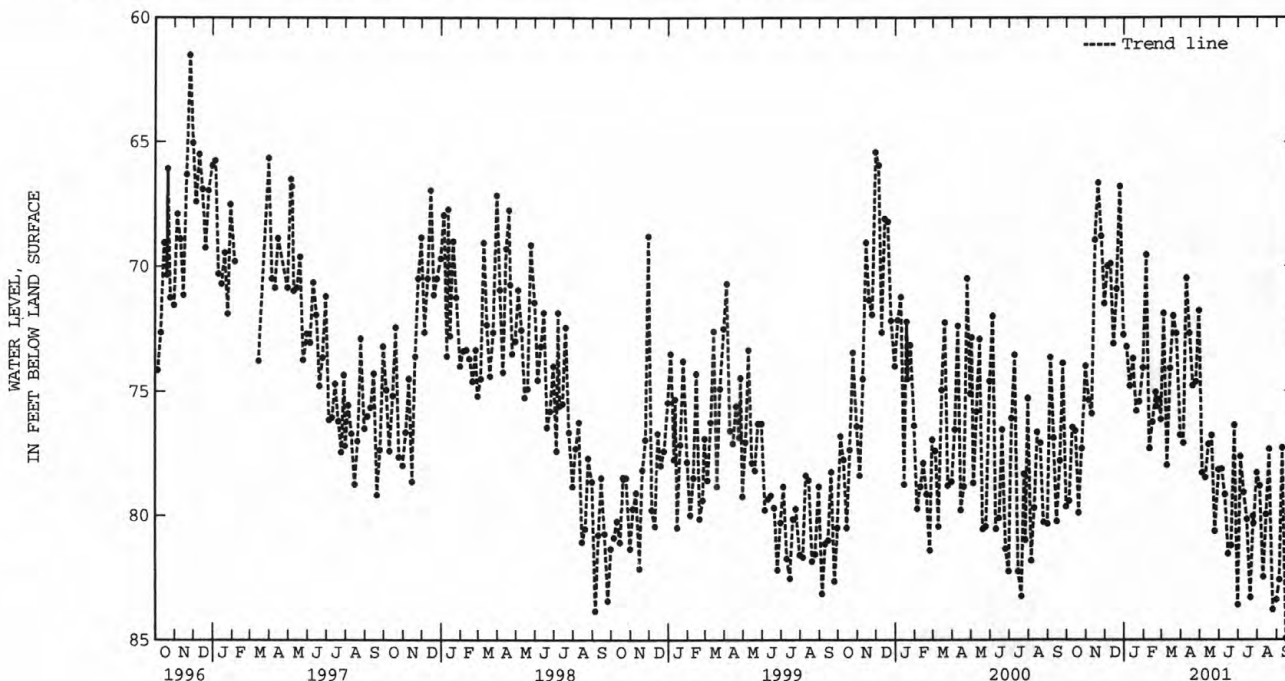
**EXTREMES FOR PERIOD OF RECORD.**--Highest water level recorded, 49.40 ft below land-surface datum, Jun. 6, 1987; lowest recorded, 85.59 ft below land-surface datum, Sep. 22, 2001.

**EXTREMES FOR CURRENT YEAR.**--Highest instantaneous water level, 62.75 ft below land-surface datum, Nov. 27; lowest instantaneous water-level, 85.59 ft below land-surface datum, Sep. 22.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	79.42	75.35	70.00	73.23	69.55	71.89	77.10	78.30	78.15	77.65	78.85	82.60
10	76.45	75.90	69.90	74.80	77.30	77.99	70.50	78.50	79.18	79.10	82.48	77.30
15	76.60	68.95	73.10	73.70	76.25	74.10	72.70	77.15	81.55	80.18	79.99	84.95
20	79.90	66.65	70.92	75.80	75.05	72.00	74.80	76.79	81.22	83.30	77.35	84.50
25	77.30	68.80	66.80	75.43	75.35	72.70	74.65	80.65	76.39	80.05	83.79	79.90
EOM	74.00	71.49	72.75	74.08	76.15	76.78	71.79	78.18	83.60	78.30	83.39	79.95

WATER YEAR 2001	HIGHEST	66.65	NOV 20, 2000	LOWEST	84.95	SEP 15, 2001
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## GROUND-WATER LEVELS

51

## ACCOMACK COUNTY

374425075400003. Local number, 65K 29 SOW 114C.

**LOCATION.**--Lat 37°44'27", long 75°39'59", NAD83, Hydrologic Unit 02080109, 0.2 mi northwest of intersection of State Highway 662 and U.S. Highway 13, 0.6 mi northwest of State Highway 662, and 0.9 mi east of Greenbush. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Yorktown-Eastover aquifer of Miocene-Pliocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 315 ft, screened 305 to 315 ft.

**INSTRUMENTATION.**--Continuous strip-chart recorder. Prior to Jul. 20, 1985, occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel.

**DATUM.**--Elevation of land-surface datum is 45 ft above sea level, from topographic map. Measuring point: Top of recorder shelf, 1.5 ft above land-surface datum prior to Feb. 27, 1990; 1.6 ft thereafter.

**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage. Missing record due to recorder malfunction.

**PERIOD OF RECORD.**--March 1980 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

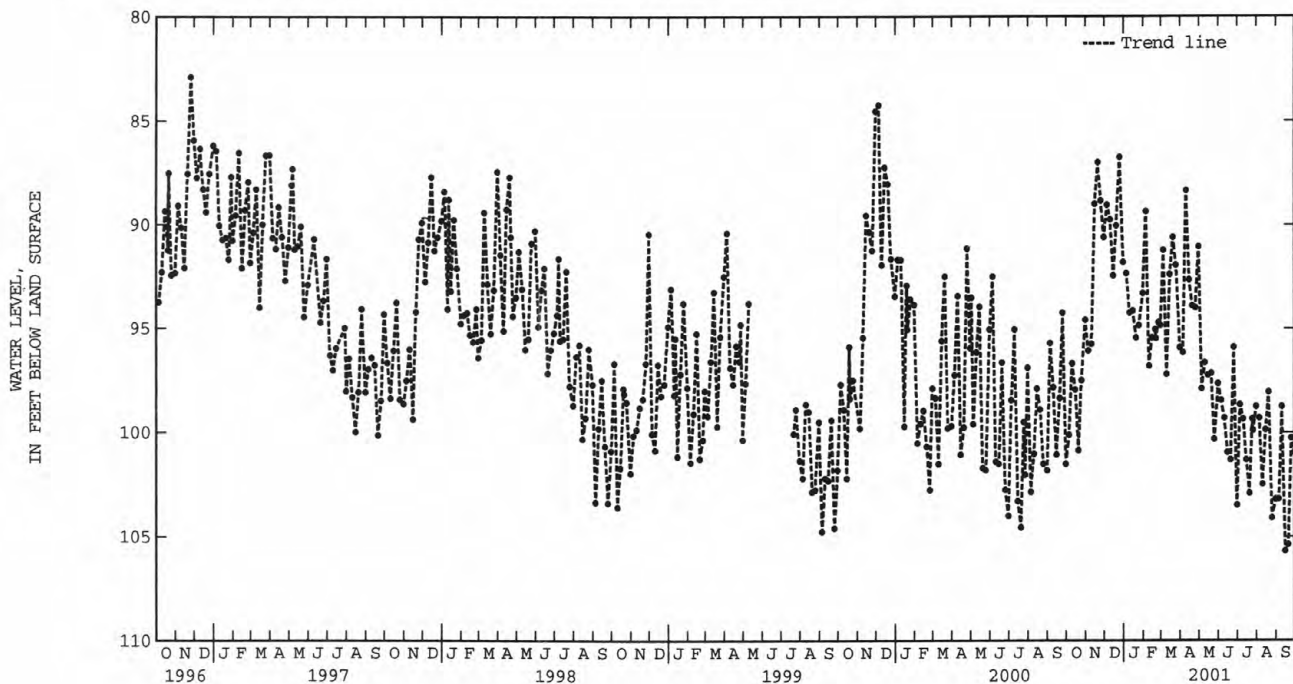
**EXTREMES FOR PERIOD OF RECORD.**--Highest water level recorded, 71.50 ft below land-surface datum, Feb. 24, 1986; lowest recorded, 108.92 ft below land-surface datum, Aug. 17, 1991.

**EXTREMES FOR CURRENT YEAR.**--Highest instantaneous water level, 82.85 ft below land-surface datum, Nov. 27; lowest instantaneous water level, 106.55 ft below land-surface datum, Sep. 22.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	100.10	96.08	89.05	92.35	89.35	91.22	96.15	97.90	98.45	98.65	99.30	103.18
10	96.70	95.75	89.75	94.25	96.80	97.20	88.35	96.65	99.30	99.35	102.48	98.75
15	97.95	89.00	92.45	94.15	95.45	92.40	92.65	97.25	100.95	101.30	99.85	105.69
20	100.85	87.00	90.05	95.45	95.05	90.60	93.90	97.15	101.30	102.90	98.05	105.38
25	97.50	88.85	86.75	94.85	94.70	91.95	94.00	100.30	95.90	99.35	104.10	100.25
EOM	94.58	90.60	91.80	93.30	94.85	95.92	91.05	97.65	103.48	98.75	103.19	100.95

WATER YEAR 2001      HIGHEST    86.75    DEC 25, 2000      LOWEST    105.69    SEP 15, 2001



## GROUND-WATER LEVELS

## ACCOMACK COUNTY

374425075400004. Local number, 65K 30 SOW 114S.

**LOCATION.**--Lat 37°44'25", long 75°39'59", NAD83, Hydrologic Unit 02080109, 0.2 mi northwest of intersection of State Highway 662 and U.S. Highway 13, 0.6 mi northwest of State Highway 662, and 0.9 mi east of Greenbush. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Columbia aquifer of Quaternary age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 40 ft, screened 30 to 40 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to Jul. 20, 1995, bimonthly measurement with chalked tape. Prior to Oct. 1, 1985, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 45 ft above sea level, from topographic map. Measuring point: Top of casing, 1.0 ft above land-surface datum prior to Mar. 1, 1988; 1.5 ft thereafter.

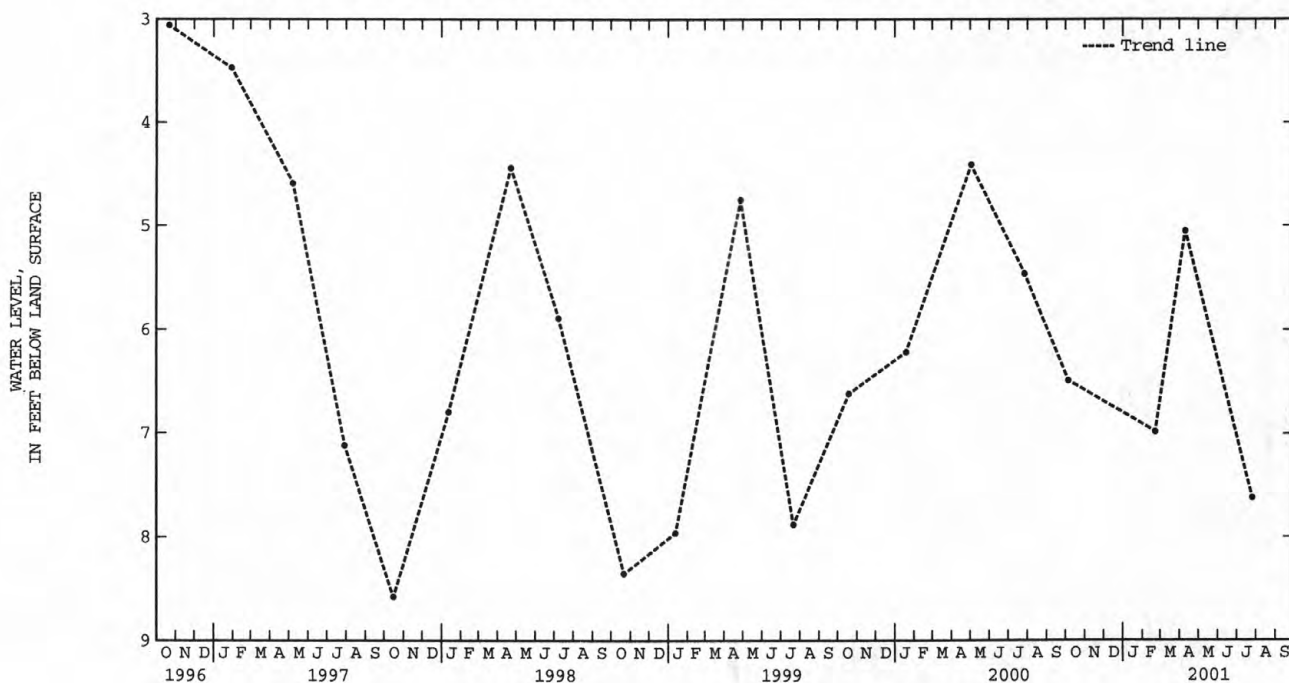
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division.

**PERIOD OF RECORD.**--March 1980 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 3.06 ft below land-surface datum, Oct. 21, 1996; lowest measured, 20.10 ft below land-surface datum, Dec. 9, 1981.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05	6.49	FEB 21	6.98	APR 10	5.05	JUL 26	7.62
WATER YEAR 2001		HIGHEST	5.05	APR 10, 2001		LOWEST	7.62 JUL 26, 2001





## GROUND-WATER LEVELS

53

## ACCOMACK COUNTY

374314075401402. Local number, 65K 59 SOW 183A.

**LOCATION.**--Lat 37°43'14", long 75°40'13", NAD83, Hydrologic Unit 02080109, at Accomac, 500 ft north of U.S. Highway 13 (Business), 700 ft east of intersection of State Highway 764, and U.S. Highway 13 (Business). Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Yorktown-Eastover aquifer of Miocene-Pliocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4.5 in. to 250 ft, diameter 2 in. from 250 to 285 ft, depth 285 ft, screened 275 to 285 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Aug. 6, 1990 to Jan. 28, 1997, continuous strip-chart recorder. Prior to Aug. 7, 1990, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 35 ft above sea level, from topographic map. Measuring point: Top of casing, 1.2 ft above land-surface datum.

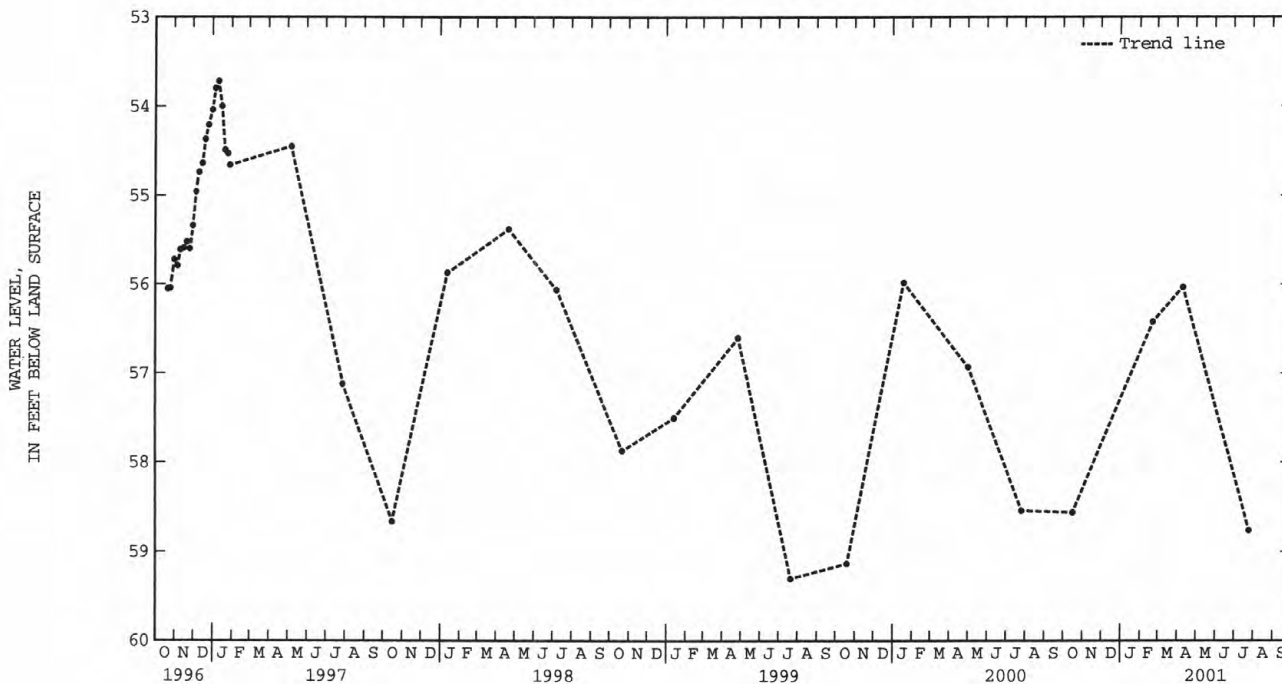
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage. Missing record due to recorder malfunction.

**PERIOD OF RECORD.**--May 1990 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level recorded, 52.28 ft below land-surface datum, Jan. 13, 1993; lowest recorded, 61.24 ft below land-surface datum, Sep. 29, 1991.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16	58.56	FEB 21	56.42	APR 10	56.03	JUL 25	58.76
WATER YEAR 2001		HIGHEST	56.03	APR 10, 2001	LOWEST	58.76	JUL 25, 2001



## GROUND-WATER LEVELS

## ACCOMACK COUNTY

374314075401403. Local number, 65K 60 SOW 183B.

**LOCATION.**--Lat 37°43'14", long 75°40'13", NAD83, Hydrologic Unit 02080109, at Accomac, 500 ft north of U.S. Highway 13 (Business), 700 ft east of intersection of State Highway 764, and U.S. Highway 13 (Business). Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Yorktown-Eastover aquifer of Miocene-Pliocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4.5 in. to 210 ft, diameter 2 in. from 210 to 235 ft, depth 235 ft, screened 225 to 235 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to Jul. 20, 1995, bimonthly measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 35 ft above sea level, from topographic map. Measuring point: Top of casing, 1.3 ft above land-surface datum.

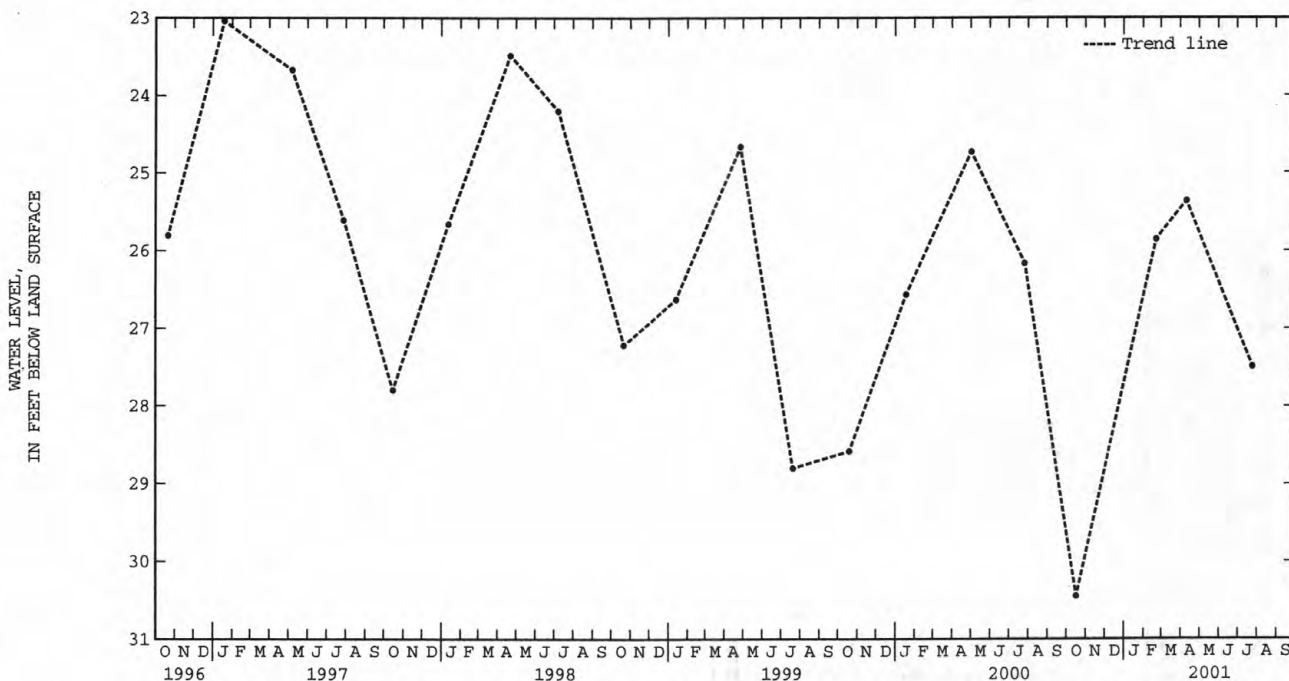
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level may be affected by local pumpage.

**PERIOD OF RECORD.**--May 1990 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 21.50 ft below land-surface datum, May 7, 1990; lowest measured, 30.57 ft below land-surface datum, Oct. 10, 1995.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16	30.45	FEB 21	25.86	APR 10	25.37	JUL 25	27.49
WATER YEAR 2001		HIGHEST	25.37	APR 10, 2001	LOWEST	30.45	OCT 16, 2000



## GROUND-WATER LEVELS

55

## ACCOMACK COUNTY

374314075401404. Local number, 65K 61 SOW 183C.

**LOCATION.**--Lat 37°43'14", long 75°40'13", NAD83, Hydrologic Unit 02080109, at Accomac, 500 ft north of U.S. Highway 13 (Business), 700 ft east of intersection of State Highway 764, and U.S. Highway 13 (Business). Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Yorktown-Eastover aquifer of Miocene-Pliocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4.5 in. to 82 ft, diameter 2 in. from 82 to 134 ft, depth 134 ft, screened 124 to 134 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Aug. 6, 1990 to Jan. 28, 1997, continuous strip-chart recorder. Prior to Aug. 6, 1990, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 35 ft above sea level, from topographic map. Measuring point: Top of casing, 1.1 ft above land-surface datum.

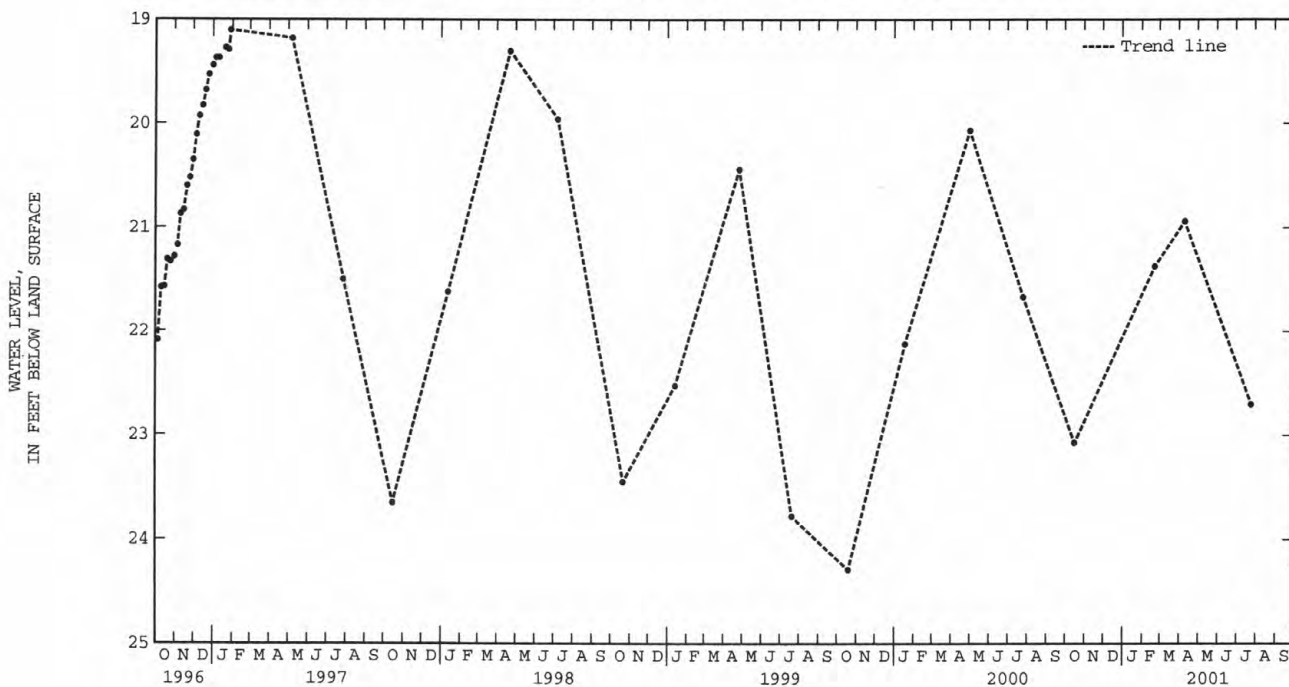
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level may be affected by local pumpage.

**PERIOD OF RECORD.**--May 1990 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 18.20 ft below land-surface datum, May 7, 1990; lowest recorded, 27.32 ft below land-surface datum, Sep. 13, 14, 1995.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16	23.07	FEB 21	21.37	APR 10	20.94	JUL 25	22.70
WATER YEAR 2001		HIGHEST	20.94	APR 10, 2001		LOWEST	23.07
							OCT 16, 2000



## GROUND-WATER LEVELS

## ACCOMACK COUNTY

374314075401405. Local number, 65K 62 SOW 183D.

**LOCATION.**--Lat 37°43'14", long 75°40'13", NAD83, Hydrologic Unit 02080109, at Accomac, 500 ft north of U.S. Highway 13 (Business), 700 ft east of intersection of State Highway 764, and U.S. Highway 13 (Business). Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Columbia aquifer of Quaternary age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4.5 in., depth 20 ft, screened 15 to 20 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to Jul. 20, 1995, bimonthly measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 35 ft above sea level, from topographic map. Measuring point: Top of casing, 1.3 ft above land-surface datum.

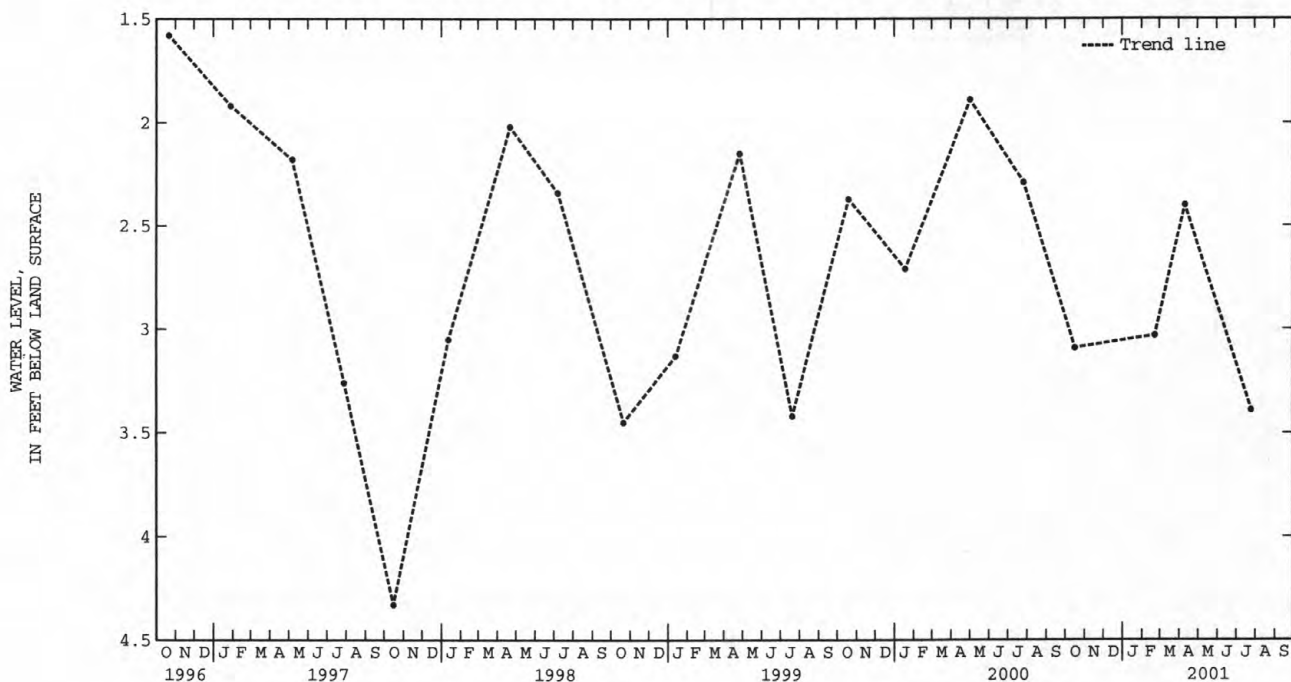
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division.

**PERIOD OF RECORD.**--May 1990 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 1.09 ft below land-surface datum, Jan. 4, 1993; lowest measured, 4.48 ft below land-surface datum, Oct. 10, 1995.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16	3.09	FEB 21	3.03	APR 10	2.40	JUL 25	3.39
WATER YEAR 2001		HIGHEST	2.40	APR 10, 2001	LOWEST	3.39	JUL 25, 2001





## GROUND-WATER LEVELS

57

## ACCOMACK COUNTY

374320075380501. Local number, 66K 2 SOW 101C.

**LOCATION.**--Lat 37°43'19", long 75°36'55", NAD83, Hydrologic Unit 02080110, 0.2 mi north of State Highway 662, 2.2 mi east of intersection of State Highway 662 and U.S. Highway 13 (Business), and 2.8 mi east of Accomac. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Yorktown-Eastover aquifer of Miocene-Pliocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 292 ft, screened 282 to 292 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to Jul. 20, 1995, bimonthly measurement with chalked tape. Prior to Oct. 1, 1985, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 10 ft above sea level, from topographic map. Measuring point: Top of casing, 0.4 ft above land-surface datum prior to Mar. 1, 1988; 0.6 ft thereafter.

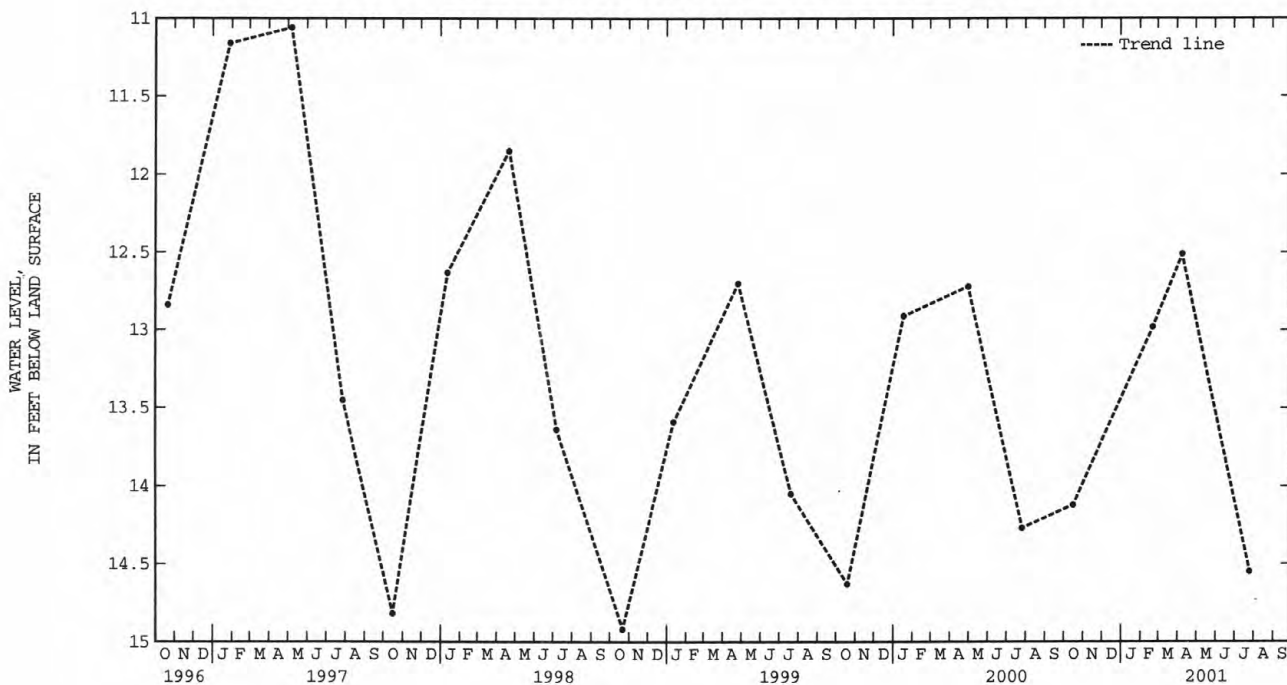
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

**PERIOD OF RECORD.**--June 1977 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 8.57 ft below land-surface datum, Apr. 25, 1984; lowest measured, 17.30 ft below land-surface datum, Aug. 5, 1986.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16	14.12	FEB 21	12.98	APR 09	12.51	JUL 25	14.55
WATER YEAR 2001		HIGHEST	12.51	APR 09, 2001		LOWEST	14.55 JUL 25, 2001



## GROUND-WATER LEVELS

## ACCOMACK COUNTY

374320075365602. Local number, 66K 3 SOW 101B.

**LOCATION.**--Lat 37°43'19", long 75°36'55", NAD83, Hydrologic Unit 02080110, 0.2 mi north of State Highway 662, 2.2 mi east of intersection of State Highway 662 and U.S. Highway 13 (Business), and 2.8 mi east of Accomac. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Yorktown-Eastover aquifer of Miocene-Pliocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 220 ft, screened 210 to 220 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to Jul. 20, 1995, bimonthly measurement with chalked tape. Prior to Oct. 1, 1985, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 8 ft above sea level, from topographic map. Measuring point: Top of casing, 0.36 ft above land-surface datum prior to Mar. 1, 1988; 0.65 ft thereafter.

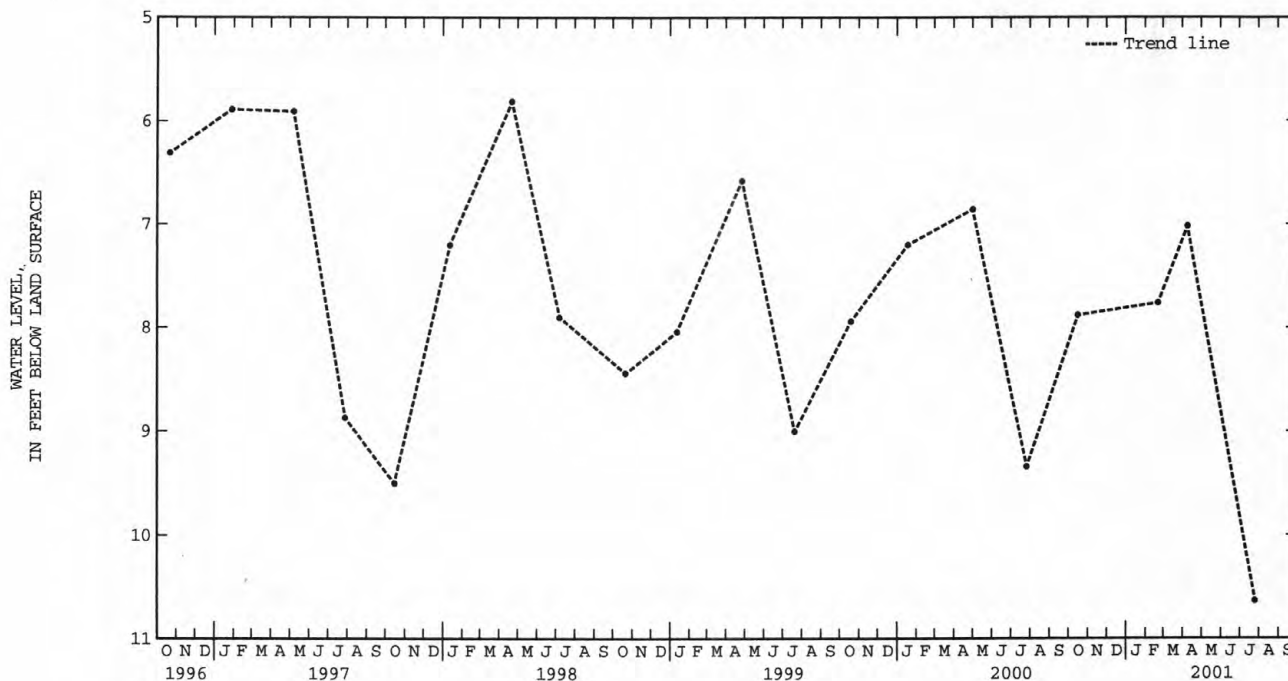
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

**PERIOD OF RECORD.**--June 1977 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 4.04 ft below land-surface datum, Apr. 25, 1984; lowest measured, 10.64 ft below land-surface datum, Jul. 25, 2001.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16	7.88	FEB 21	7.76	APR 09	7.02	JUL 25	10.64
WATER YEAR 2001		HIGHEST	7.02	APR 09, 2001	LOWEST	10.64	JUL 25, 2001



## GROUND-WATER LEVELS

59

## ACCOMACK COUNTY

374320075365603. Local number, 66K 4 SOW 101A.

**LOCATION.**--Lat 37°43'19", long 75°36'55", NAD83, Hydrologic Unit 02080110, 0.2 mi north of State Highway 662, 2.2 mi east of intersection of State Highway 662 and U.S. Highway 13 (Business), and 2.8 mi east of Accomac. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Yorktown-Eastover aquifer of Miocene-Pliocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 152 ft, screened 142 to 152 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to Jul. 20, 1995, bimonthly measurement with chalked tape. Prior to Oct. 1, 1985, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 10 ft above sea level, from topographic map. Measuring point: Top of casing, 0.4 ft above land-surface datum prior to Mar. 1, 1988; 0.65 ft Mar. 1, 1988, to Jun. 20, 1989; at land-surface datum Jun. 21, 1989, to Jan. 3, 1990; 0.85 ft above land-surface datum thereafter.

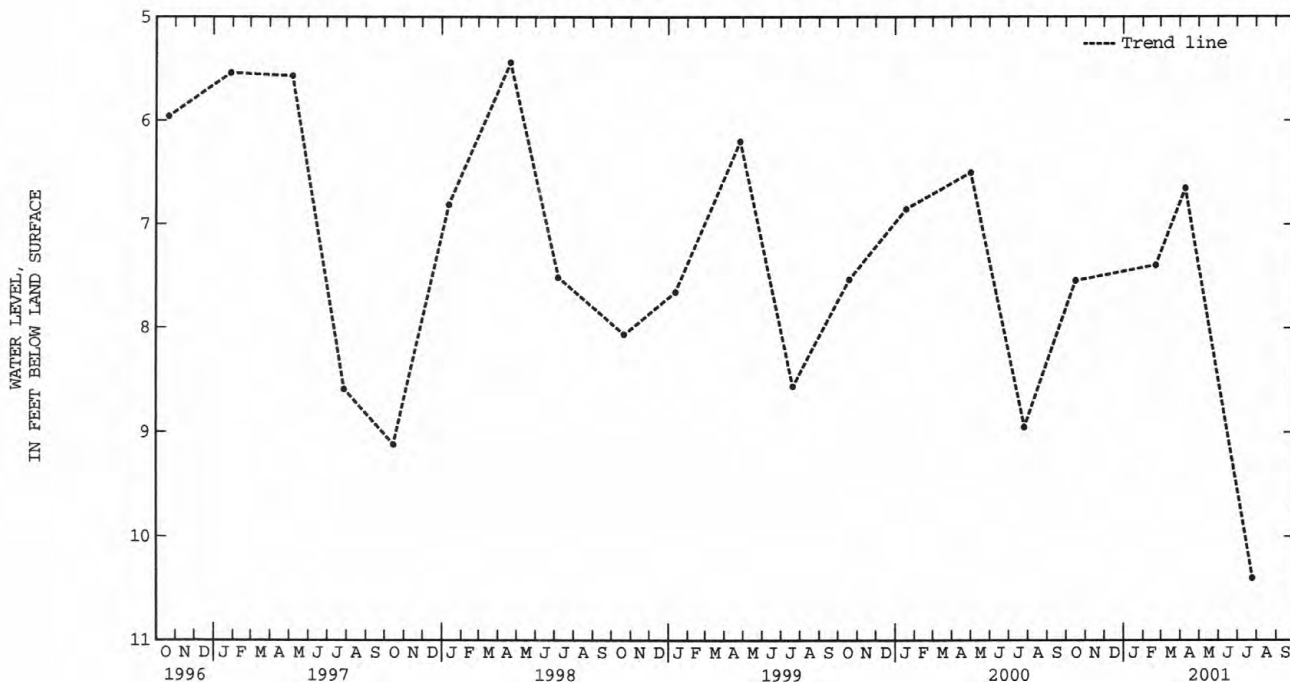
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

**PERIOD OF RECORD.**--June 1977 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 3.99 ft below land-surface datum, Apr. 25, 1984; lowest measured, 10.40 ft below land-surface datum, Jul. 25, 2001.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16	7.54	FEB 21	7.39	APR 09	6.65	JUL 25	10.40
WATER YEAR 2001		HIGHEST	6.65	APR 09, 2001	LOWEST	10.40	JUL 25, 2001



## GROUND-WATER LEVELS

## ACCOMACK COUNTY

375225075321701. Local number, 66L 1 SOW 107C.

**LOCATION.**--Lat 37°52'25", long 75°32'16", NAD83, Hydrologic Unit 02080110, 0.15 mi northwest of State Highway 679, 0.45 mi northeast of intersection of State Highways 679 and 790, and 0.7 mi west of Assawoman. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Yorktown-Eastover aquifer of Miocene-Pliocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 305 ft, screened 295 to 305 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to Jul. 20, 1995, bimonthly measurement with chalked tape. Prior to Oct. 1, 1985, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 6 ft above sea level, from topographic map. Measuring point: Top of casing, 0.33 ft above land-surface datum prior to Mar. 1, 1988; 0.4 ft thereafter.

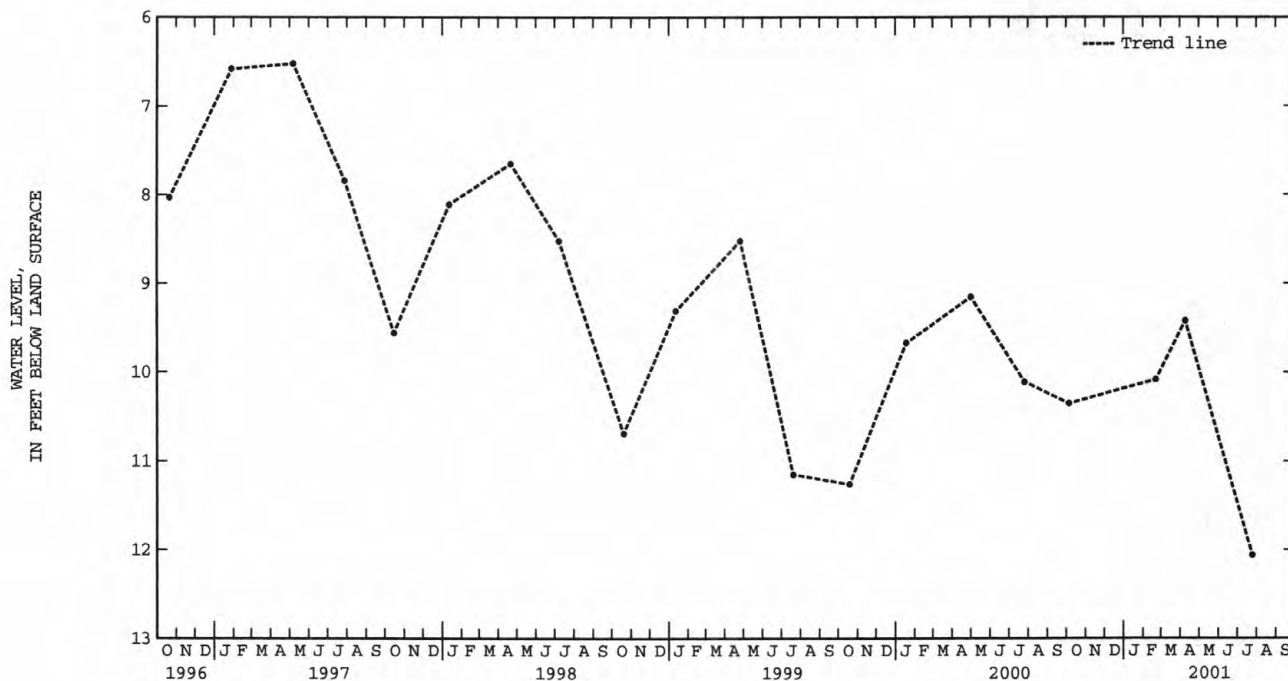
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

**PERIOD OF RECORD.**--September 1977 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 3.06 ft below land-surface datum, Jan. 4, 1984; lowest measured, 12.06 ft below land-surface datum, Jul. 25, 2001.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05	10.35	FEB 21	10.08	APR 09	9.42	JUL 25	12.06
WATER YEAR 2001		HIGHEST	9.42	APR 09, 2001	LOWEST	12.06	JUL 25, 2001





## GROUND-WATER LEVELS

61

## ACCOMACK COUNTY

375225075321702. Local number, 66L 2 SOW 107A.

**LOCATION.**---Lat 37°52'25", long 75°32'16", NAD83, Hydrologic Unit 02080110, 0.15 mi northwest of State Highway 679, 0.45 mi northeast of intersection of State Highways 679 and 790, and 0.7 mi west of Assawoman. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**---Yorktown-Eastover aquifer of Miocene-Pliocene age.

**WELL CHARACTERISTICS.**---Drilled observation water well, diameter 4 in., depth 140 ft, screened 130 to 140 ft.

**INSTRUMENTATION.**---Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to Jul. 20, 1995, bimonthly measurement with chalked tape. Prior to Oct. 1, 1985, occasional measurement with chalked tape.

**DATUM.**---Elevation of land-surface datum is 5 ft above sea level, from topographic map. Measuring point: Top of casing, 0.23 ft above land-surface datum prior to Mar. 1, 1988; 0.6 ft thereafter.

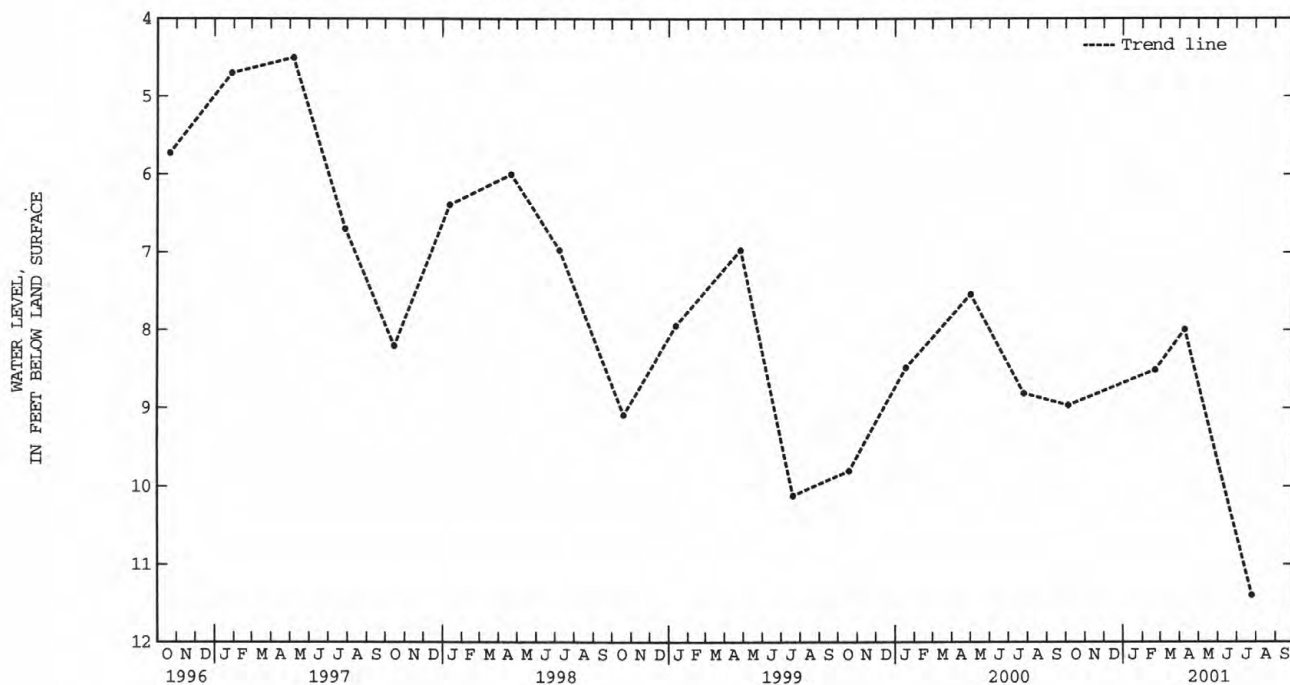
**REMARKS.**---Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

**PERIOD OF RECORD.**---October 1977 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**---Highest water level measured, 0.21 ft below land-surface datum, Apr. 25, 1984; lowest measured, 11.40 ft below land-surface datum, Jul. 25, 2001.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05	8.96	FEB 21	8.51	APR 09	7.99	JUL 25	11.40
WATER YEAR 2001		HIGHEST	7.99	APR 09, 2001		LOWEST	11.40 JUL 25, 2001



## GROUND-WATER LEVELS

## ACCOMACK COUNTY

375225075321703. Local number, 66L 3 SOW 107B.

**LOCATION.**--Lat 37°52'25", long 75°32'16", NAD83, Hydrologic Unit 02080110, 0.15 mi northwest of State Highway 679, 0.45 mi northeast of intersection of State Highways 679 and 790, and 0.7 mi west of Assawoman. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Yorktown-Eastover aquifer of Miocene-Pliocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 206 ft, screened 191 to 201 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to Jul. 20, 1995, bimonthly measurement with chalked tape. Prior to Oct. 1, 1985, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 5 ft above sea level, from topographic map. Measuring point: Top of casing, 1.1 ft above land-surface datum prior to Jun. 19, 1990; 0.3 ft thereafter.

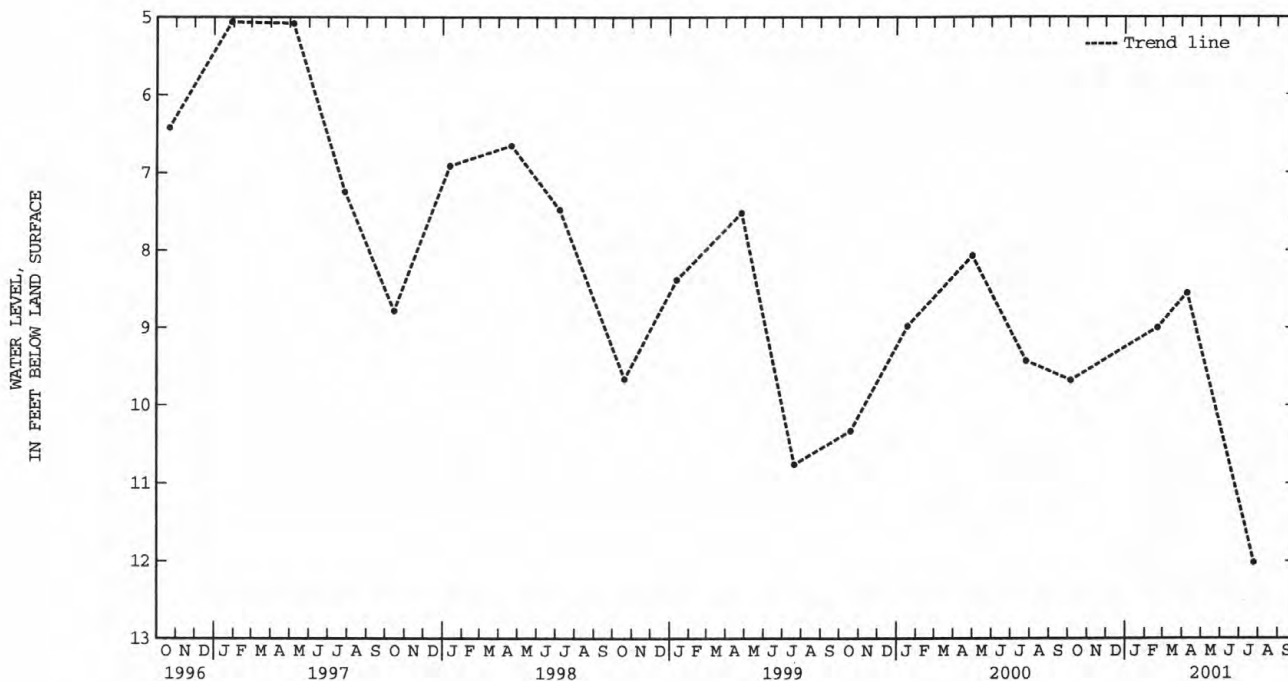
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

**PERIOD OF RECORD.**--October 1977 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 0.64 ft below land-surface datum, Apr. 25, 1984; lowest measured, 12.02 ft below land-surface datum, Jul. 25, 2001.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05	9.68	FEB 21	9.00	APR 09	8.55	JUL 25	12.02
WATER YEAR 2001		HIGHEST	8.55	APR 09, 2001	LOWEST	12.02	JUL 25, 2001



## GROUND-WATER LEVELS

63

## ACCOMACK COUNTY

375723075344401. Local number, 66M 16 SOW 110A.

**LOCATION.**--Lat 37°57'23", long 75°34'43", NAD83, Hydrologic Unit 02060009, 0.25 mi northeast of State Highway 693, 0.5 mi southeast of intersection of State Highways 693 and 706, and 2.3 mi northwest of Oak Hall. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Yorktown-Eastover aquifer of Miocene-Pliocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 130 ft, screened 120 to 130 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to Jul. 20, 1995, bimonthly measurement with chalked tape. Prior to Oct. 1, 1985, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 11 ft above sea level, from topographic map. Measuring point: Top of casing, 0.45 ft above land-surface datum prior to Feb. 29, 1988; 0.65 ft Mar. 1, 1988, to Oct. 3, 1989; at land-surface datum Oct. 4, 1989, to Jan. 3, 1990; 1.0 ft above land-surface datum Jan. 4, 1990, to Oct. 10, 1990; 0.70 ft thereafter.

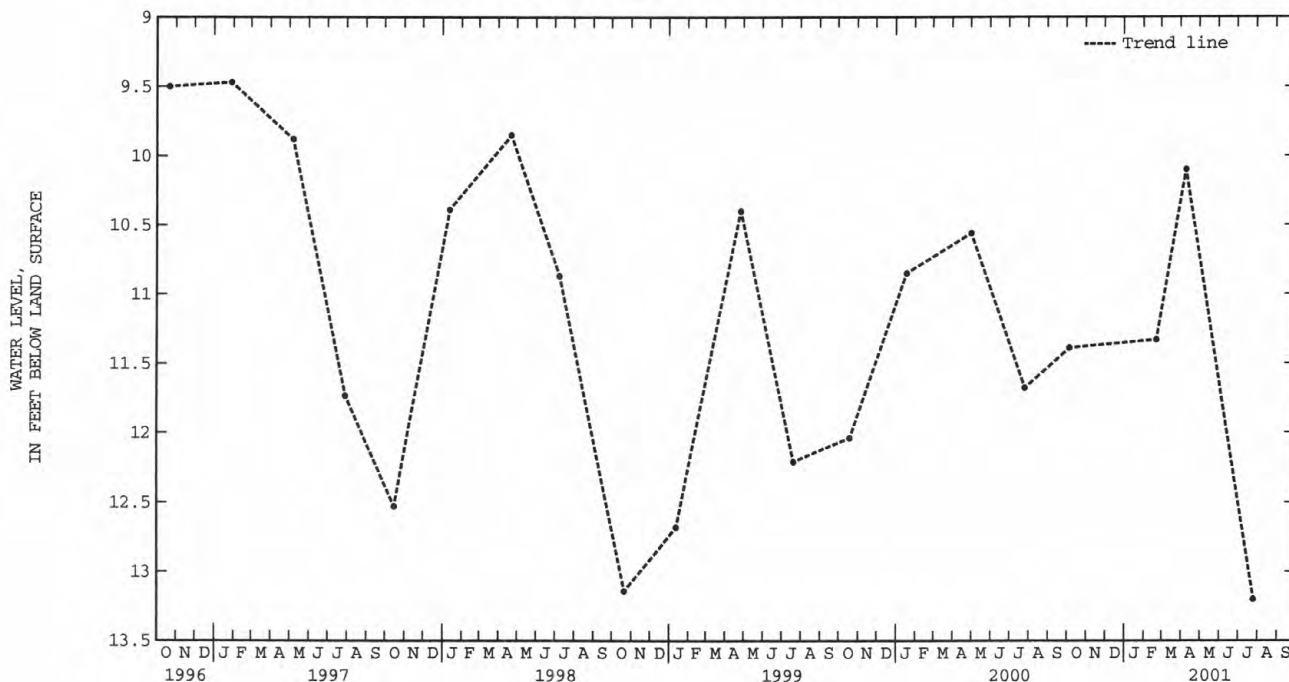
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

**PERIOD OF RECORD.**--September 1978 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 8.28 ft below land-surface datum, Feb. 19, 1986; lowest measured, 13.20 ft below land-surface datum, Jul. 25, 2001.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05	11.39	FEB 21	11.33	APR 09	10.10	JUL 25	13.20
WATER YEAR 2001		HIGHEST	10.10	APR 09, 2001		LOWEST	13.20 JUL 25, 2001



## GROUND-WATER LEVELS

## ACCOMACK COUNTY

375723075344402. Local number, 66M 17 SOW 110B.

**LOCATION.**--Lat 37°57'23", long 75°34'43", NAD83, Hydrologic Unit 02060009, 0.25 mi northeast of State Highway 693, 0.5 mi southeast of intersection of State Highways 693 and 706, and 2.3 mi northwest of Oak Hall. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Yorktown-Eastover aquifer of Miocene-Pliocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 178 ft, screened 168 to 178 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to Jul. 20, 1995, bimonthly measurement with chalked tape. Prior to Oct. 1, 1985, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 11 ft above sea level, from topographic map. Measuring point: Top of casing, 0.45 ft above land-surface datum prior to Feb. 29, 1988; 0.75 ft thereafter.

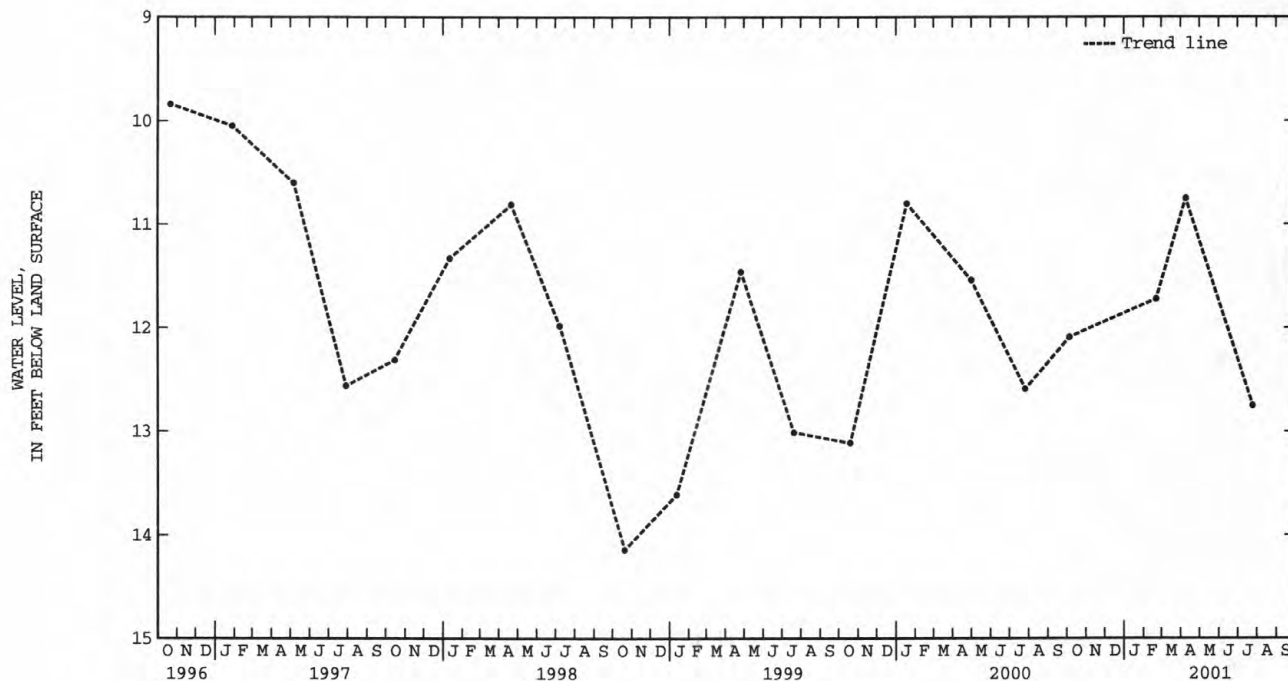
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

**PERIOD OF RECORD.**--October 1978 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 8.76 ft below land-surface datum, Apr. 1, 1980; lowest measured, 14.14 ft below land-surface datum, Oct. 20, 1998.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05	12.09	FEB 21	11.72	APR 09	10.75	JUL 25	12.75
WATER YEAR 2001		HIGHEST	10.75	APR 09, 2001		LOWEST	12.75
							JUL 25, 2001



## GROUND-WATER LEVELS

65

## ACCOMACK COUNTY

375723075344403. Local number, 66M 18 SOW 110C.

**LOCATION.**--Lat 37°57'23", long 75°34'43", NAD83, Hydrologic Unit 02060009, 0.25 mi northeast of State Highway 693, 0.5 mi southeast of intersection of State Highways 693 and 706, and 2.3 mi northwest of Oak Hall. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Yorktown-Eastover aquifer of Miocene-Pliocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 240 ft, screened 230 to 240 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to Jul. 20, 1995, bimonthly measurement with chalked tape. Prior to Oct. 1, 1985, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 11 ft above sea level, from topographic map. Measuring point: Top of casing, 0.65 ft above land-surface datum.

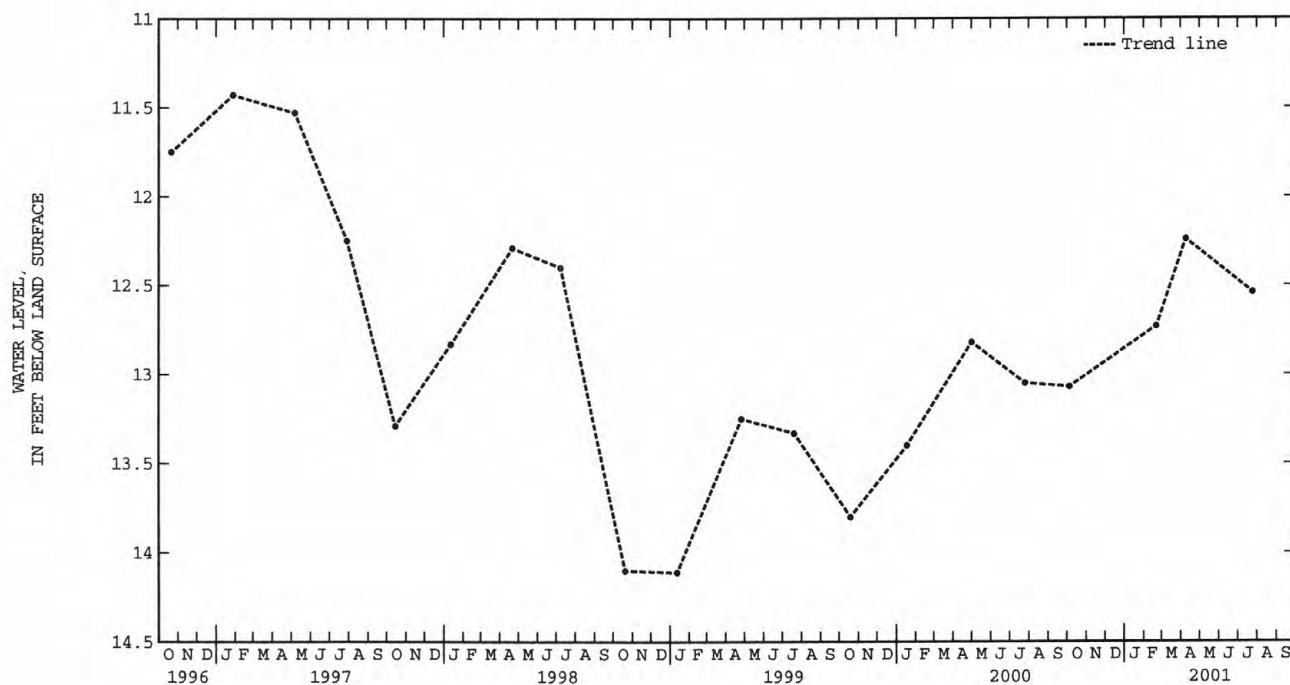
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage. Water from this well is known to contain concentrations of dissolved solids greater than 1,000 mg/L.

**PERIOD OF RECORD.**--October 1978 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 8.43 ft below land-surface datum, Aug. 12, 1981; lowest measured, 14.12 ft below land-surface datum, Oct. 10, 1995.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05	13.07	FEB 21	12.73	APR 09	12.24	JUL 25	12.54
WATER YEAR 2001		HIGHEST	12.24	APR 09, 2001		LOWEST	13.07
							OCT 05, 2000





## GROUND-WATER LEVELS

## ACCOMACK COUNTY

375723075344404. Local number, 66M 19 SOW 110S.

**LOCATION.**--Lat 37°57'23", long 75°34'43", NAD83, Hydrologic Unit 02060009, 0.25 mi northeast of State Highway 693, 0.5 mi southeast of intersection of State Highways 693 and 706, and 2.3 mi northwest of Oak Hall. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Columbia aquifer of Quaternary age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 36 ft, screened 26 to 36 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to Jul. 20, 1995, bimonthly measurement with chalked tape. Prior to Oct. 1, 1985, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 11 ft above sea level, from topographic map. Measuring point: Top of casing, 1.0 ft above land-surface datum prior to Feb. 29, 1988; 0.35 ft thereafter.

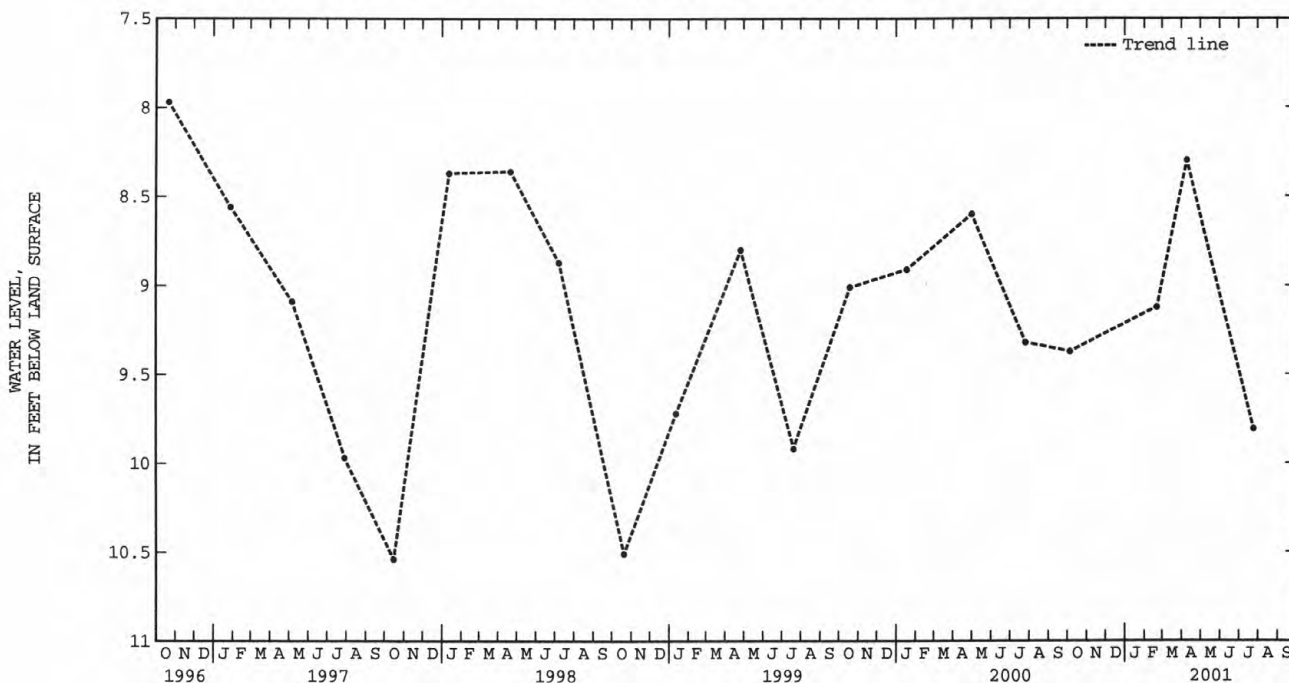
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division.

**PERIOD OF RECORD.**--September 1978 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 7.97 ft below land-surface datum, Oct. 21, 1996; lowest measured, 11.34 ft below land-surface datum, Nov. 6, 1981.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05	9.37	FEB 21	9.12	APR 09	8.30	JUL 25	9.81
WATER YEAR 2001		HIGHEST	8.30	APR 09, 2001		LOWEST	9.81 JUL 25, 2001



## GROUND-WATER LEVELS

67

## ACCOMACK COUNTY

375610075361801. Local number, 66M 23 SOW 181A.

**LOCATION.**--Lat 37°56'10", long 75°36'17", NAD83, Hydrologic Unit 02080109, 100 ft south of State Highway 703, 0.1 mi east of intersection of State Highways 701 and 703, and 2.7 mi northwest of Makemie Park. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Brightseat-upper Potomac aquifer of Cretaceous-Paleocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4.5 in., depth 1,300 ft, screened 1,290 to 1,300 ft.

**INSTRUMENTATION.**--Occasional measurement with manometer or chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to Jul. 20, 1995, bimonthly measurement with manometer or chalked tape.

**DATUM.**--Elevation of land-surface datum is 6 ft above sea level, from topographic map. Measuring point: Top of casing, 1.5 ft above land-surface datum.

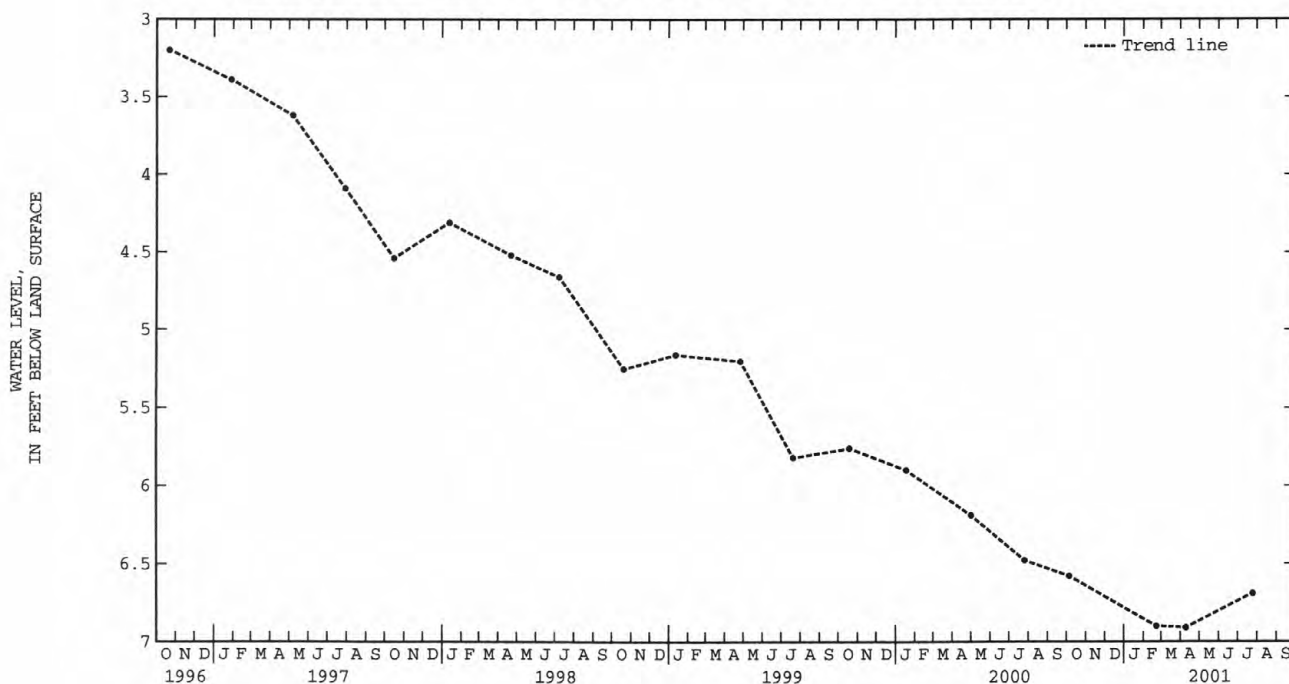
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional pumpage. Water from this well is known to contain concentrations of dissolved solids greater than 1,000 mg/L.

**PERIOD OF RECORD.**--January 1988 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 2.38 ft above land-surface datum, Jan. 26, 1988; lowest measured, 6.91 ft below land-surface datum, Apr. 9, 2001.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05	6.58	FEB 21	6.90	APR 09	6.91	JUL 25	6.69
WATER YEAR 2001		HIGHEST	6.58	OCT 05, 2000	LOWEST	6.91	APR 09, 2001



## GROUND-WATER LEVELS

## ACCOMACK COUNTY

375610075361802. Local number, 66M 24 SOW 181B.

**LOCATION.**--Lat 37°56'10", long 75°36'17", NAD83, Hydrologic Unit 02080109, 100 ft south of State Highway 703, 0.1 mi east of intersection of State Highways 701 and 703, and 2.7 mi northwest of Makemie Park. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--St. Marys-Choptank aquifer of Miocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4.5 in., depth 508 ft, screened 498 to 508 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to Jul. 20, 1995, bimonthly measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 6 ft above sea level, from topographic map. Measuring point: Top of casing, 0.85 ft above land-surface datum.

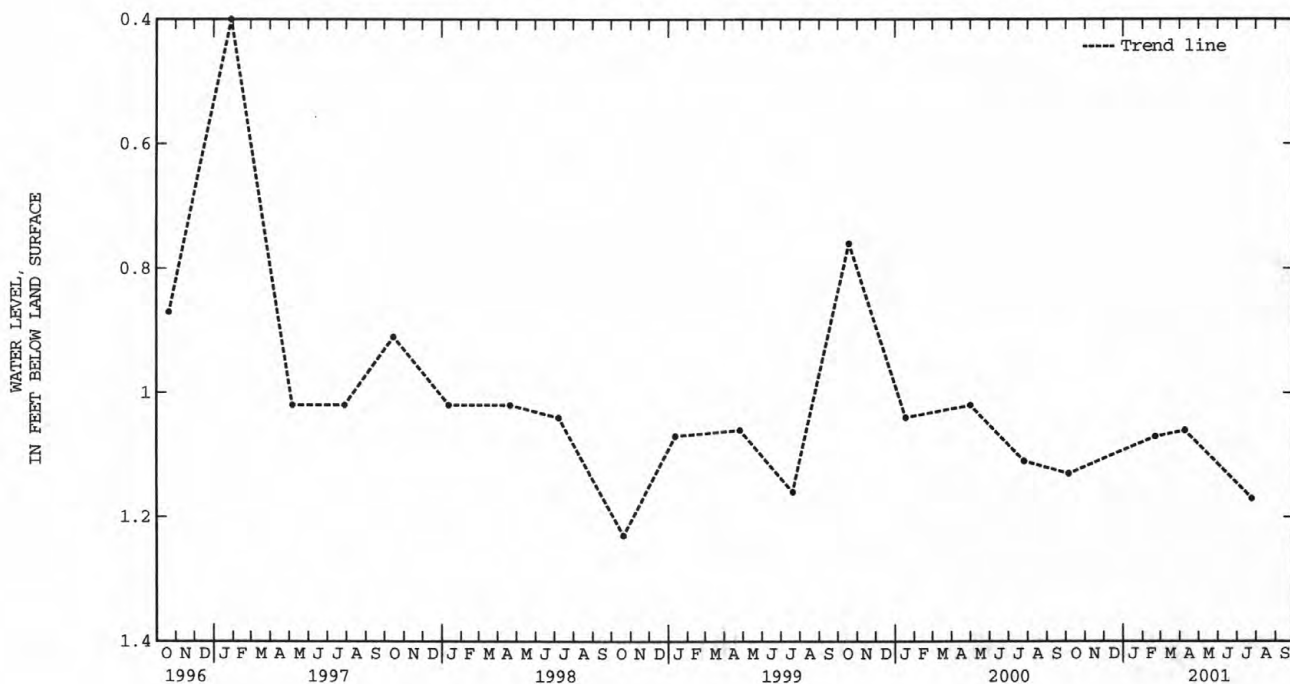
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Water from this well is known to contain concentrations of dissolved solids greater than 1,000 mg/L.

**PERIOD OF RECORD.**--October 1987 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 0.25 ft below land-surface datum, Mar. 7, 1989; lowest measured, 1.25 ft below land-surface datum, Jun. 19, 1990.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05	1.13	FEB 21	1.07	APR 09	1.06	JUL 25	1.17
WATER YEAR 2001		HIGHEST	1.06	APR 09, 2001	LOWEST	1.17	JUL 25, 2001



## GROUND-WATER LEVELS

69

## ACCOMACK COUNTY

375610075361803. Local number, 66M 25 SOW 181C.

**LOCATION.**--Lat 37°56'10", long 75°36'17", NAD83, Hydrologic Unit 02080109, 100 ft south of State Highway 703, 0.1 mi east of intersection of State Highways 701 and 703, and 2.7 mi northwest of Makemie Park. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Yorktown-Eastover aquifer of Miocene-Pliocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4.5 in., depth 340 ft, screened 330 to 340 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to Jul. 20, 1995, bimonthly measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 6 ft above sea level, from topographic map. Measuring point: Top of casing, 0.95 ft above land-surface datum.

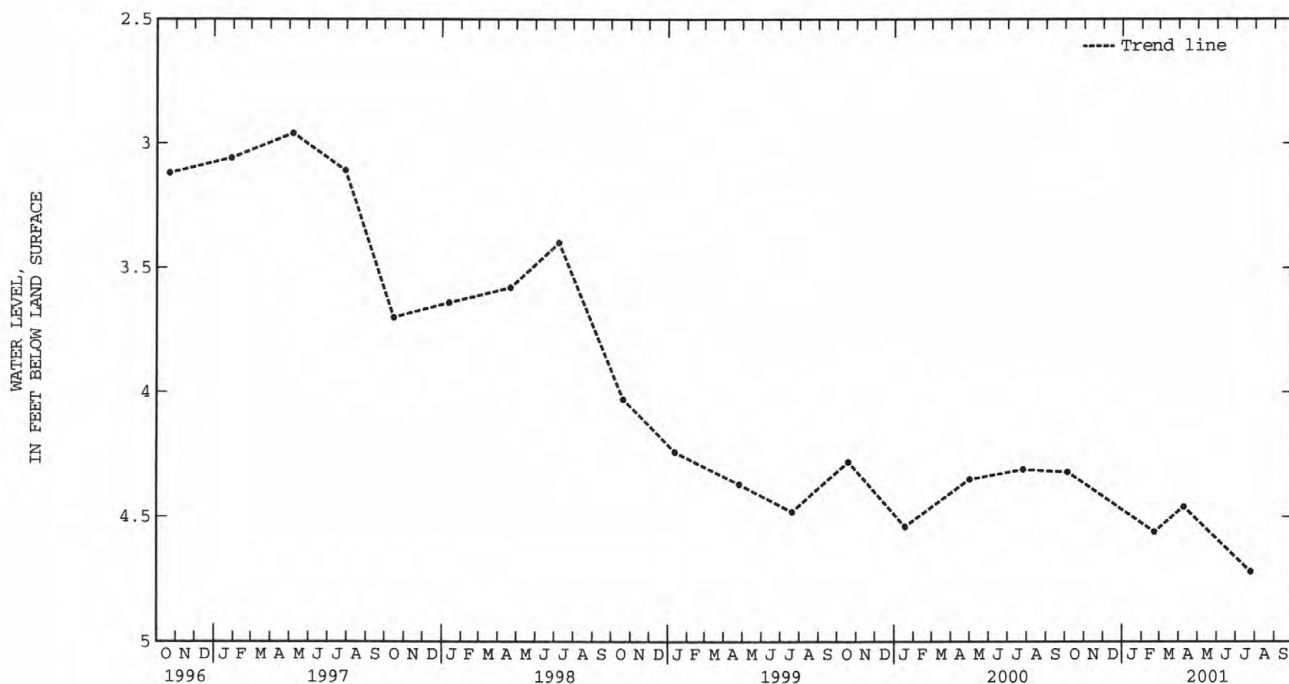
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Water from this well is known to contain concentrations of dissolved solids greater than 1,000 mg/L.

**PERIOD OF RECORD.**--October 1987 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 2.10 ft below land-surface datum, Apr. 28, 1993; lowest measured, 4.72 ft below land-surface datum, Jul. 25, 2001.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05	4.32	FEB 21	4.56	APR 09	4.46	JUL 25	4.72
WATER YEAR 2001		HIGHEST	4.32	OCT 05, 2000	LOWEST	4.72	JUL 25, 2001



## GROUND-WATER LEVELS

## ACCOMACK COUNTY

375610075361804. Local number, 66M 26 SOW 181D.

**LOCATION.**--Lat 37°56'10", long 75°36'17", NAD83, Hydrologic Unit 02080109, 100 ft south of State Highway 703, 0.1 mi east of intersection of State Highways 701 and 703, and 2.7 mi northwest of Makemie Park. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Yorktown-Eastover aquifer of Miocene-Pliocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4.5 in., depth 230 ft, screened 220 to 230 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to Jul. 20, 1995, bimonthly measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 6 ft above sea level, from topographic map. Measuring point: Top of casing, 1.0 ft above land-surface datum.

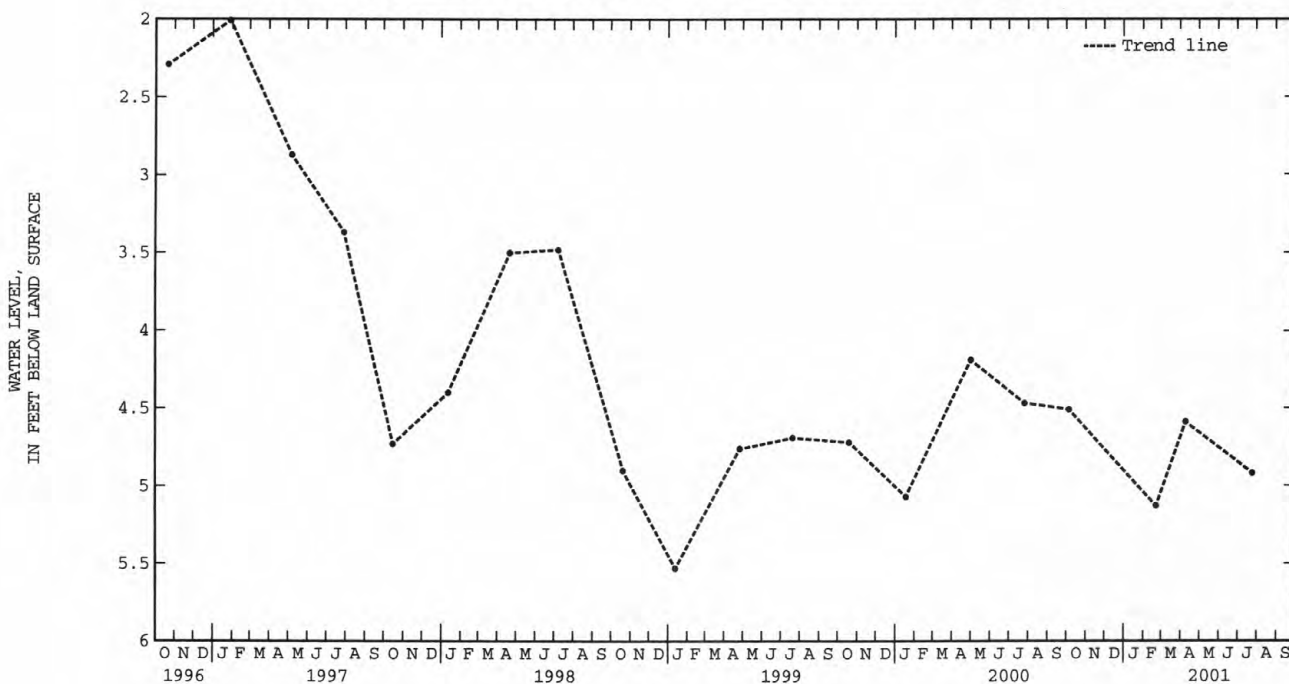
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Water from this well is known to contain concentrations of dissolved solids greater than 1,000 mg/L.

**PERIOD OF RECORD.**--October 1987 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 1.93 ft below land-surface datum, Apr. 28, 1993; lowest measured, 5.53 ft below land-surface datum, Jan. 25, 1999.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05	4.51	FEB 21	5.13	APR 09	4.59	JUL 25	4.92
WATER YEAR 2001		HIGHEST	4.51	OCT 05, 2000	LOWEST	5.13	FEB 21, 2001





## GROUND-WATER LEVELS

71

## ACCOMACK COUNTY

375610075361805. Local number, 66M 27 SOW 181E.

**LOCATION.**--Lat 37°56'10", long 75°36'17", NAD83, Hydrologic Unit 02080109, 100 ft south of State Highway 703, 0.1 mi east of intersection of State Highways 701 and 703, and 2.7 mi northwest of Makemie Park. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Columbia aquifer of Quaternary age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 30 ft, screened 20 to 30 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to Jul. 20, 1995, bimonthly measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 6 ft above sea level, from topographic map. Measuring point: Top of casing, 0.9 ft above land-surface datum.

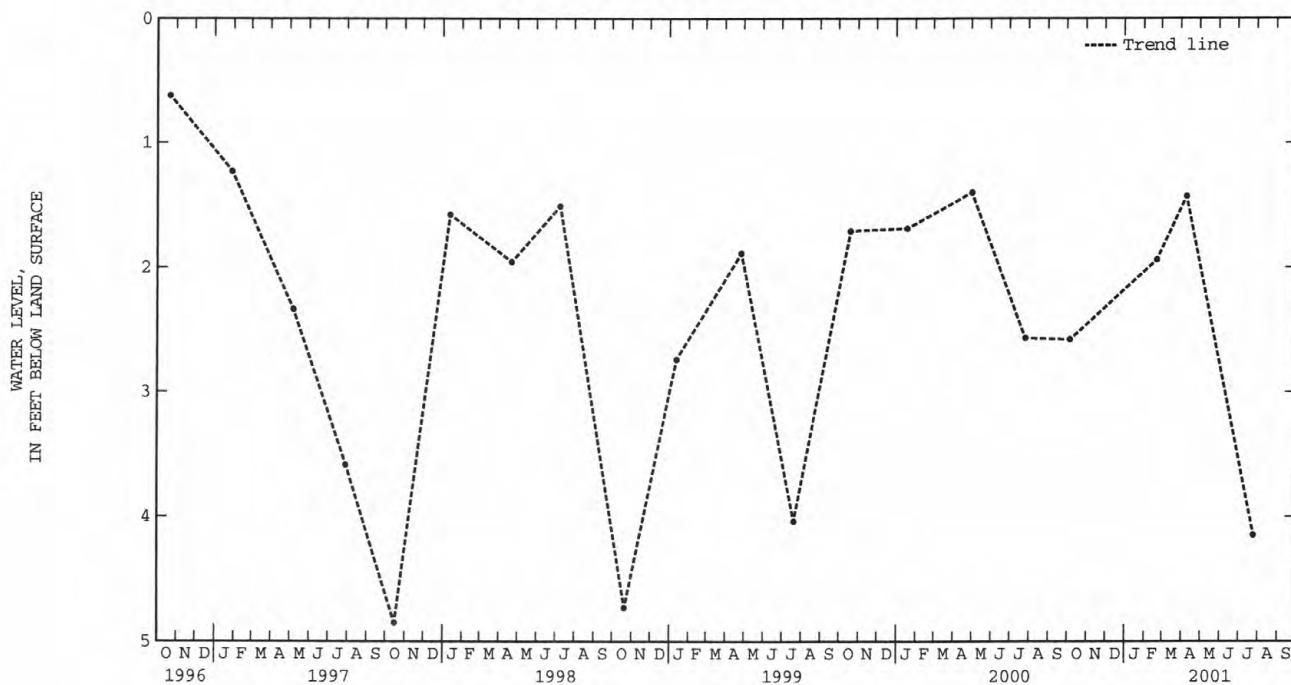
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division.

**PERIOD OF RECORD.**--October 1987 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 0.50 ft below land-surface datum, Aug. 8, 1989; lowest measured, 5.03 ft below land-surface datum, Oct. 10, 1995.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05	2.58	FEB 21	1.94	APR 09	1.43	JUL 25	4.15
WATER YEAR 2001		HIGHEST	1.43	APR 09, 2001	LOWEST	4.15	JUL 25, 2001



## GROUND-WATER LEVELS

## ACCOMACK COUNTY

375635075271501. Local number, 67M 10 SOW 115A.

**LOCATION.**--Lat 37°56'35", long 75°27'14", NAD83, Hydrologic Unit 02060010, 200 ft east of State Highway 175, 2.4 mi east of Wattsville, and 2.5 mi northeast of intersection of State Highways 175 and 798. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Columbia aquifer of Quaternary age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 52 ft, screened 32 to 52 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to Jul. 20, 1995, bimonthly measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 13 ft above sea level, from topographic map. Measuring point: Top of casing, 0.7 ft above land-surface datum prior to Feb. 28, 1988; 1.7 ft thereafter.

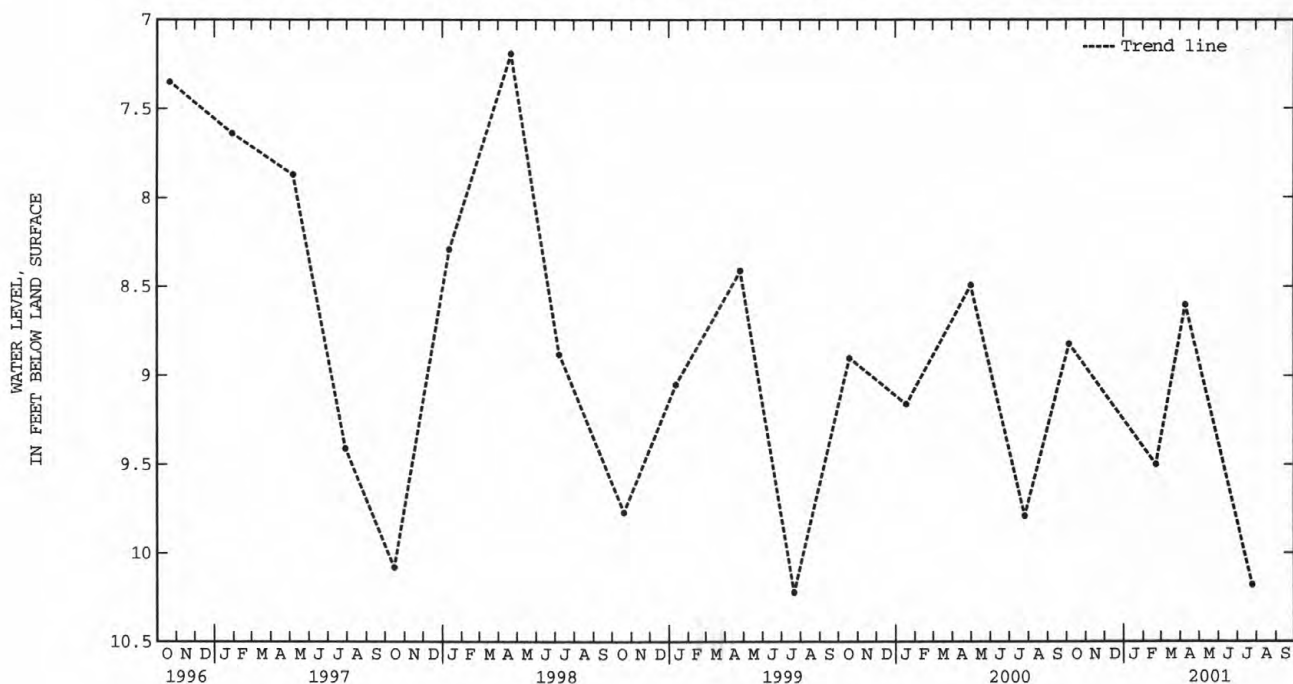
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division

**PERIOD OF RECORD.**--March 1981 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 6.72 ft below land-surface datum, Oct. 3, 1989; lowest measured, 10.36 ft below land-surface datum, Oct. 10, 1995.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05	8.82	FEB 21	9.50	APR 09	8.60	JUL 25	10.18
WATER YEAR 2001		HIGHEST	8.60	APR 09, 2001	LOWEST	10.18	JUL 25, 2001



## GROUND-WATER LEVELS

73

## ACCOMACK COUNTY

375635075271502. Local number, 67M 11 SOW 115B.

**LOCATION.**--Lat 37°56'35", long 75°27'14", NAD83, Hydrologic Unit 02060010, 200 ft east of State Highway 175, 2.4 mi east of Wattsville, and 2.5 mi northeast of intersection of State Highways 175 and 798. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Yorktown-Eastover aquifer of Miocene-Pliocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 138 ft, screened 118 to 138 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to Jul. 20, 1995, bimonthly measurement with chalked tape. Prior to Oct. 1, 1985, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 14 ft above sea level, from topographic map. Measuring point: Top of casing, 0.6 ft above land-surface datum prior to Feb. 29, 1988; 1.9 ft thereafter.

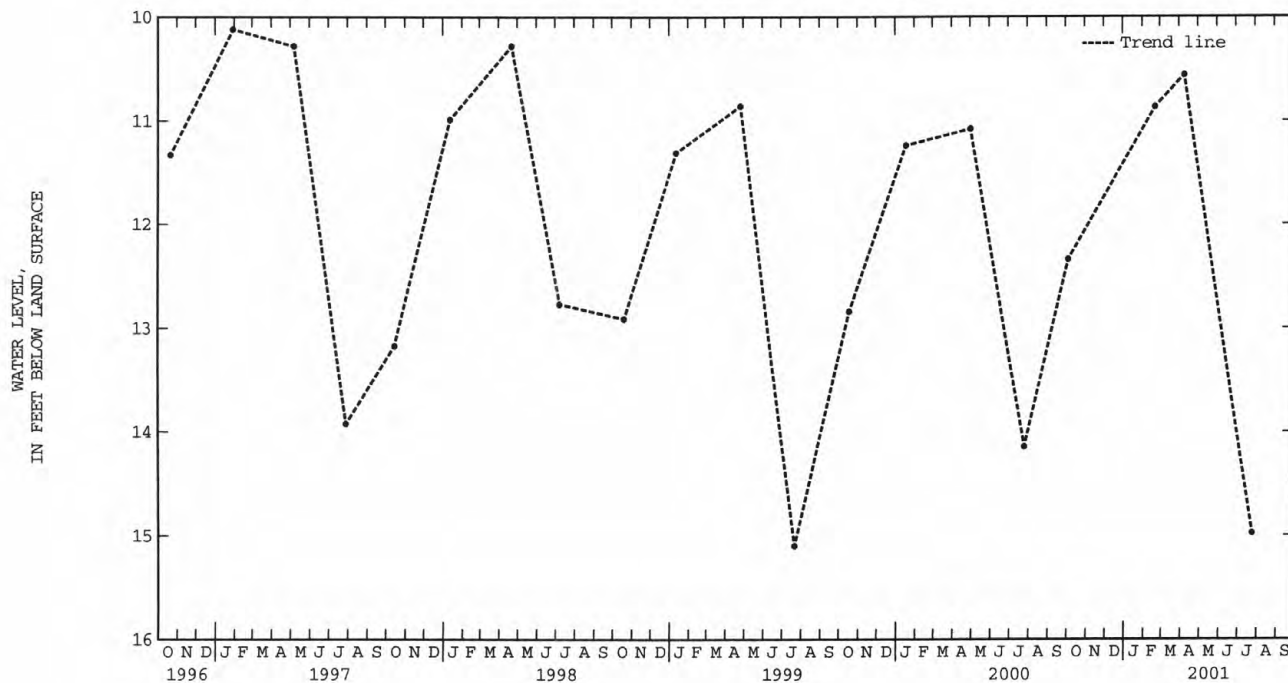
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

**PERIOD OF RECORD.**--March 1981 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 9.70 ft below land-surface datum, May 6, 1982; lowest measured, 15.60 ft below land-surface datum, Jul. 20, 1995.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05	12.34	FEB 21	10.87	APR 09	10.56	JUL 25	14.98
WATER YEAR 2001		HIGHEST	10.56	APR 09, 2001		LOWEST	14.98
							JUL 25, 2001



## GROUND-WATER LEVELS

**ACCOMACK COUNTY**

375635075271504. Local number, 67M 13 SOW 115D.

**LOCATION.**--Lat 37°56'35", long 75°27'14", NAD83, Hydrologic Unit 02060010, 50 ft east of State Highway 175, 2.4 mi east of Wattsville, and 2.6 mi northeast of intersection of State Highways 175 and 798. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Yorktown-Eastover aquifer of Miocene-Pliocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 249 ft, screened 229 to 249 ft.

**INSTRUMENTATION.**--Continuous strip-chart recorder. Prior to Oct. 5, 1985, occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel.

**DATUM.**--Elevation of land-surface datum is 16 ft above sea level, from topographic map. Measuring point: Top of casing, 1.8 ft above land-surface datum prior to Aug. 8, 1989; 1.5 ft thereafter.

**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Water levels affected by local pumpage. Missing record due to recorder malfunction.

**PERIOD OF RECORD.**--March 1981 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

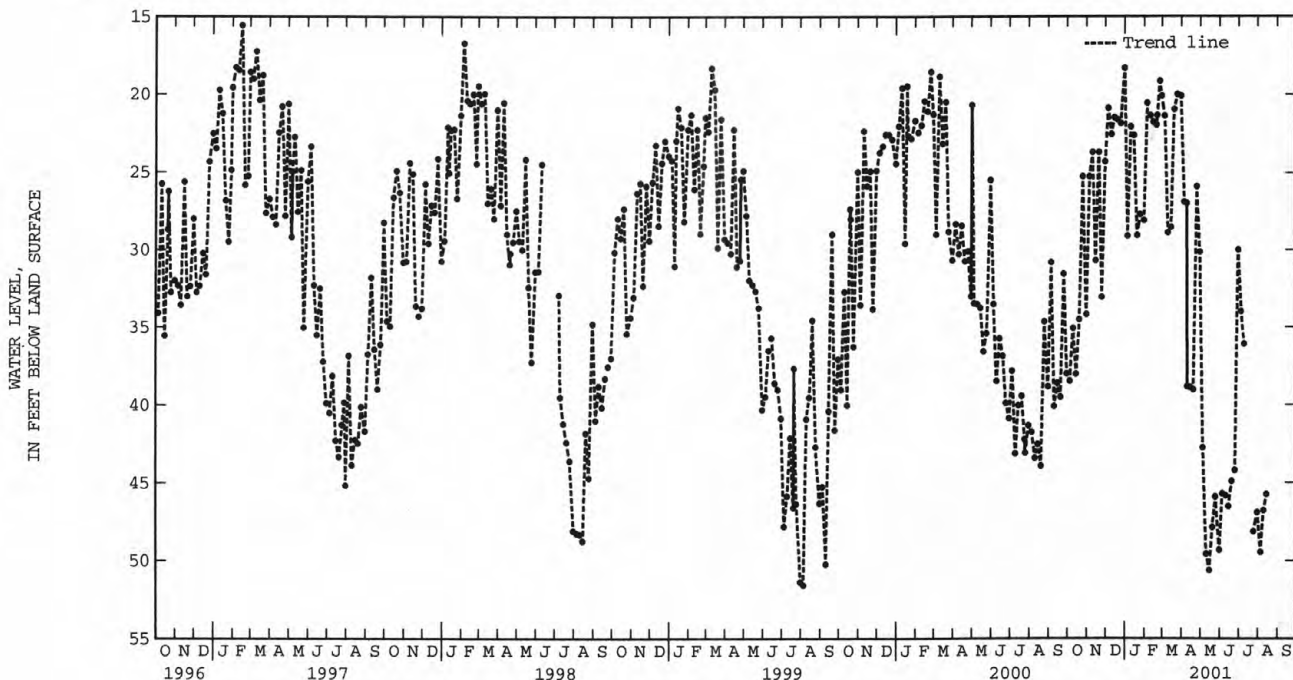
**EXTREMES FOR PERIOD OF RECORD.**--Highest water level recorded, 10.50 ft below land-surface datum, Jan. 22, 2000; lowest recorded, 53.19 ft below land-surface datum, May 14, 2001.

**EXTREMES FOR CURRENT YEAR.**--Highest instantaneous water level, 11.60 ft below land-surface datum, Feb. 24; lowest instantaneous water level, 53.19 ft below land-surface datum, May 14.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	38.45	25.25	20.88	29.10	20.55	21.37	26.90	42.75	45.70	34.00	49.45	---
10	35.05	23.69	22.53	22.05	21.35	28.90	38.85	49.55	45.82	36.10	46.78	---
15	38.00	30.69	21.48	22.60	21.75	28.55	38.88	50.61	46.50	---	45.75	---
20	34.48	23.69	21.62	29.05	21.95	20.95	39.02	47.85	44.90	---	---	---
25	25.25	33.05	21.85	27.70	19.15	20.00	25.90	45.90	44.20	48.13	---	---
EOM	34.15	24.29	18.30	28.09	20.10	20.10	30.15	49.30	30.00	46.90	---	---

WATER YEAR 2001	HIGHEST	18.30	DEC 31, 2000	LOWEST	50.61	MAY 15, 2001
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## GROUND-WATER LEVELS

75

## ALBEMARLE COUNTY

380333078264801. Local number, 43N 1 SOW 028.

**LOCATION.**--Lat 38°03'33", long 78°26'47", NAD83, Hydrologic Unit 02080204, at Key West Subdivision, 1.1 mi east of Charlottesville. Owner: Key West Development Corporation.

**AQUIFER.**--Lynchburg Formation of Precambrian age.

**WELL CHARACTERISTICS.**--Drilled unused water well, diameter 6 in., depth 409 ft, cased to 52 ft, open hole 52 to 409 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Apr. 10, 1981 to Oct. 19, 1995 continuous strip-chart recorder. Jun. 25, 1974 to Apr. 10, 1981 occasional measurement with chalked tape; Prior to Jun. 25, 1974, continuous strip-chart recorder.

**DATUM.**--Elevation of land-surface datum is 345 ft above sea level, from topographic map. Measuring point: Top of casing, 0.2 ft above land-surface datum.

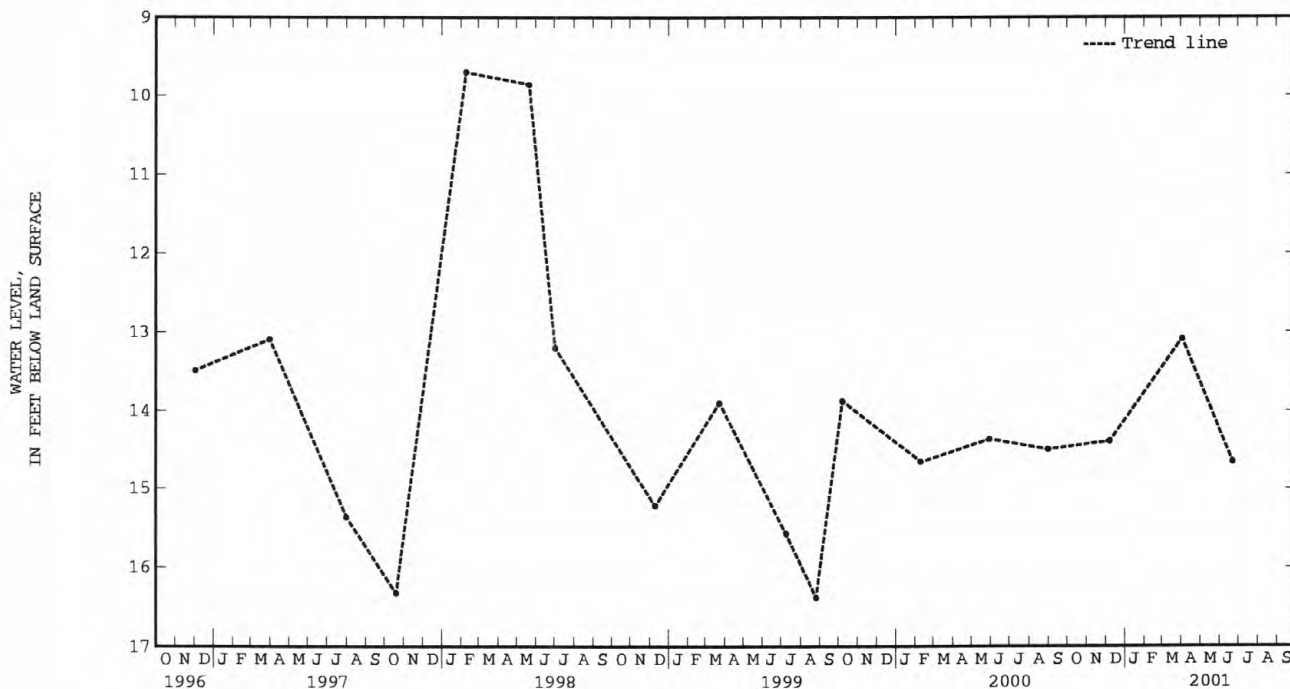
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division.

**PERIOD OF RECORD.**--February 1967 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level recorded, 8.65 ft below land-surface datum, May 3, 1984; lowest recorded, 22.10 ft below land-surface datum, Nov. 30, 1981.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 08	14.39	APR 03	13.09	JUN 22	14.66
WATER YEAR 2001		HIGHEST	13.09 APR 03, 2001	LOWEST	14.66 JUN 22, 2001





## GROUND-WATER LEVELS

## APPOMATTOX COUNTY

372514078394301. Local number, 41H 2.

**LOCATION.**--Lat 37°25'15", long 78°39'42", NAD83, Hydrologic Unit 02080207, 1.0 mi south of intersection of State Highway 636 on the east side of State Highway 640, 2.8 mi southeast of Sliders. Owner: U.S. Geological Survey.

**AQUIFER.**--Metagraywacke, quartzose schist, and melange of Cambrian age.

**WELL CHARACTERISTICS.**--Augered observation water well, diameter 3 in. to 68 ft, diameter 1.25 in. from 68 to 73 ft, depth 73 ft, screened 68 to 73 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by USGS personnel. August 1970 to October 1974, digital recorder 60-minute punch. Prior to August 1970, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 640 ft above sea level, from topographic map. Measuring point: Top of casing, 1.5 ft above land-surface datum.

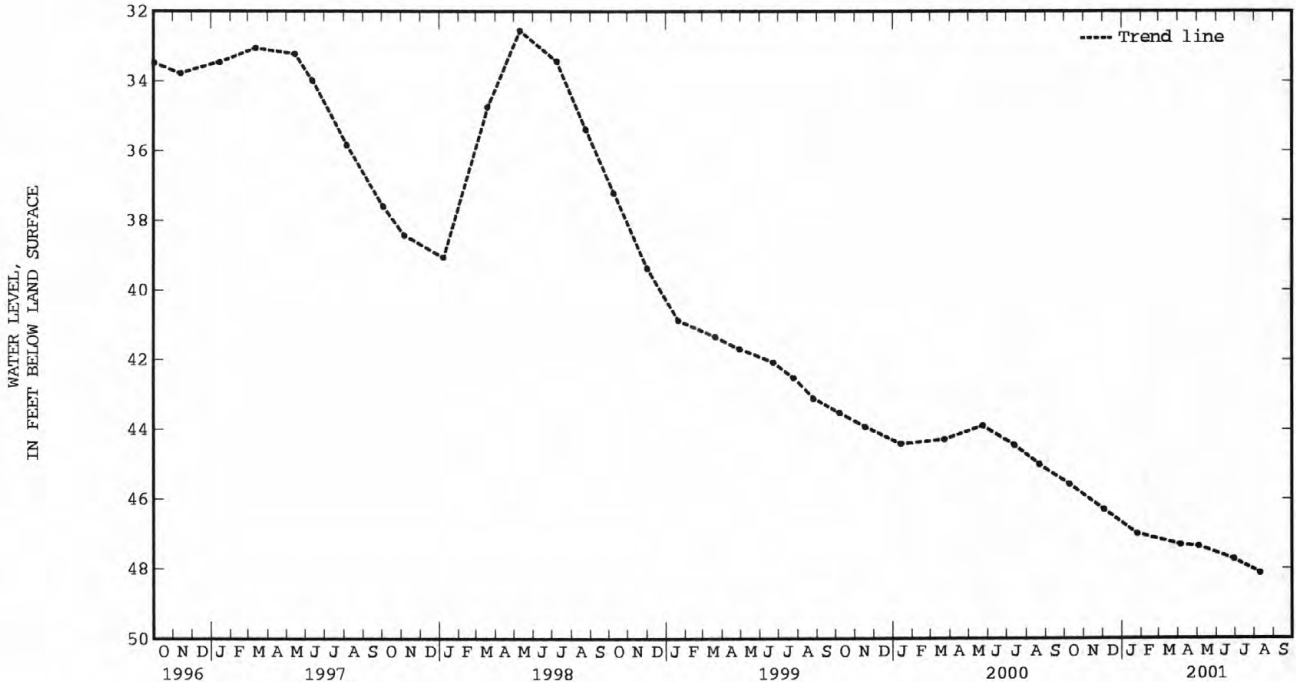
**PERIOD OF RECORD.**--March 1970 to current year. Unpublished records available prior to October 1977 in files of the Geological Survey.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 32.56 ft below land-surface datum, May 11, 1998; lowest recorded, 49.41 ft below land-surface datum, Mar. 30, 1971.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 10	45.57	JAN 26	47.00	MAY 04	47.36	AUG 10	48.13
DEC 04	46.30	APR 05	47.31	JUN 29	47.73		

WATER YEAR 2001	HIGHEST	45.57	OCT 10, 2000	LOWEST	48.13	AUG 10, 2001
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## GROUND-WATER LEVELS

77

## ARLINGTON COUNTY

385346077073701. Local number, 53V 1.

**LOCATION.**--Lat 38°53'46", long 77°07'36", NAD83, Hydrologic Unit 02070010, at Langston School, 4854 Lee Highway in Arlington.  
Owner: Arlington County School Board.

**AQUIFER.**--Brandywine Formation of Pleistocene age and Bryn Mawr (?) Gravel of Pliocene (?) age, overlying the Sykesville Formation of Precambrian age.

**WELL CHARACTERISTICS.**--Dug unused water well, diameter 24 in., depth 35 ft, terracotta casing.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by USGS personnel. Oct. 1, 1989 to Oct. 26, 1995, monthly measurement with chalked tape. Prior to Oct. 1, 1989, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 410 ft above sea level, from topographic map. Measuring point: Inner flange of manhole, at land-surface datum.

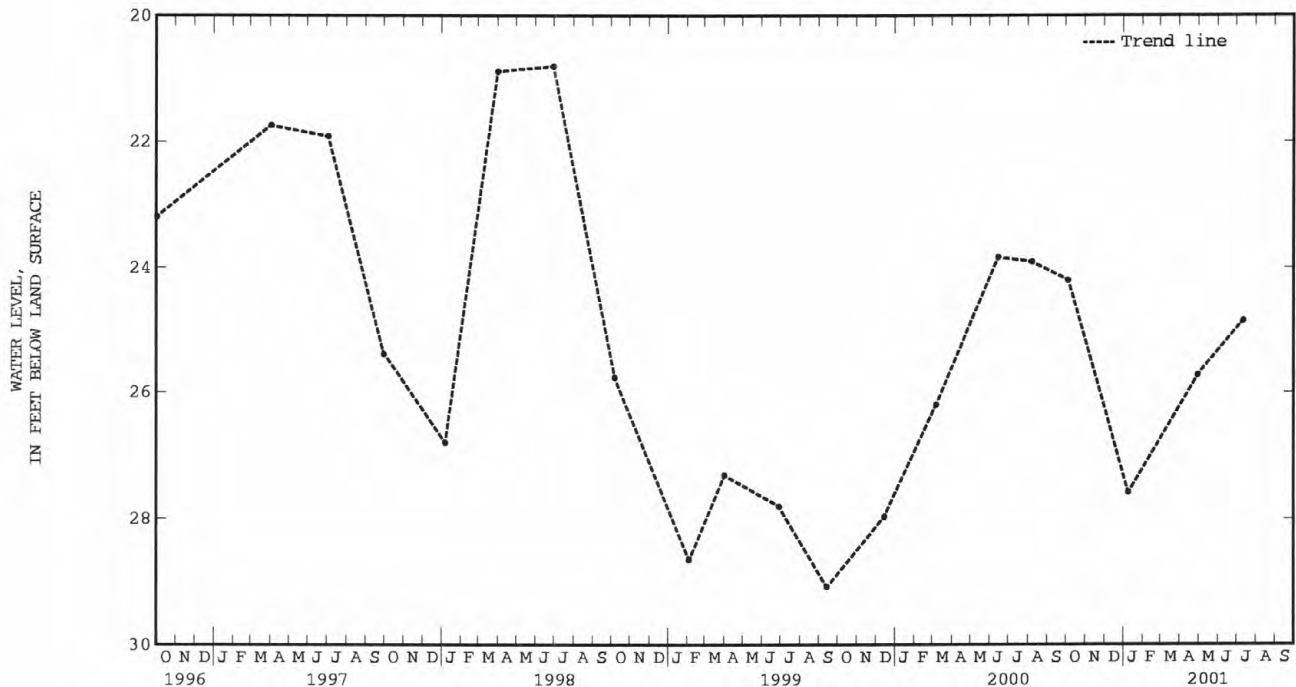
**REMARKS.**--Water levels affected by water running into well from broken water main October 1992 to August 1993.

**PERIOD OF RECORD.**--October 1931 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 14.19 ft (result of broken water main) below land-surface datum, June 28, 1993; lowest measured, 34.81 ft below land-surface datum, Dec. 5, 1931.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05	24.21	JAN 09	27.58	APR 30	25.72	JUL 11	24.86
WATER YEAR 2001		HIGHEST	24.21	OCT 05, 2000		LOWEST	27.58
				JAN 09, 2001			



## GROUND-WATER LEVELS

## ARLINGTON COUNTY

385253077042301. Local number, 54V 3.

**LOCATION.**--Lat 38°52'53", long 77°04'22", NAD83, Hydrologic Unit 02070010, at Arlington National Cemetery in Arlington. Owner: National Park Service, National Capitol Parks.

**AQUIFER.**--Terrace gravels of Holocene age and sand of Early Cretaceous age.

**WELL CHARACTERISTICS.**--Dug unused water well, diameter 48 in., depth 50 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by USGS personnel. Oct. 1, 1989 to Oct. 26, 1995, monthly measurement with chalked tape. Prior to Oct. 1, 1989, bimonthly measurement with chalked tape.

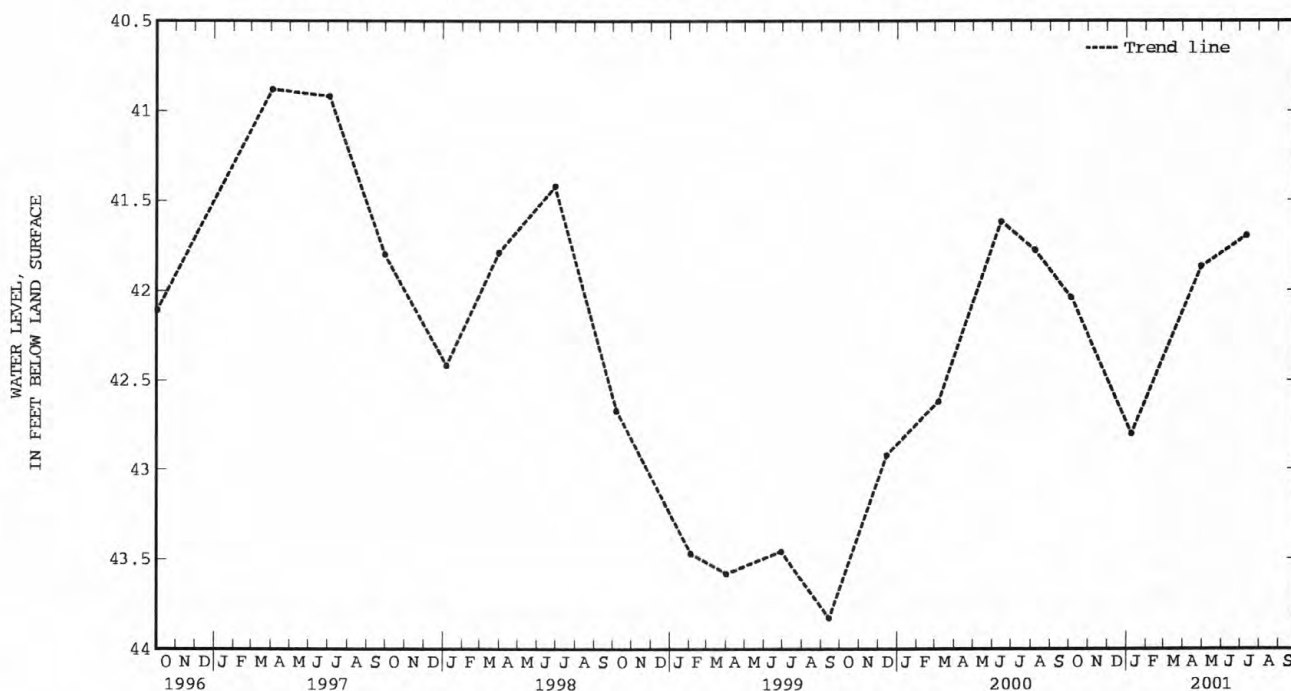
**DATUM.**--Elevation of land-surface datum is 205 ft above sea level, from topographic map. Measuring point: Top of brick and stone casing, 3.0 ft above land-surface datum.

**PERIOD OF RECORD.**--January 1958 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 40.34 ft below land-surface datum, June 26, 1978; lowest measured, 45.28 ft below land-surface datum, Nov. 28, 1988.

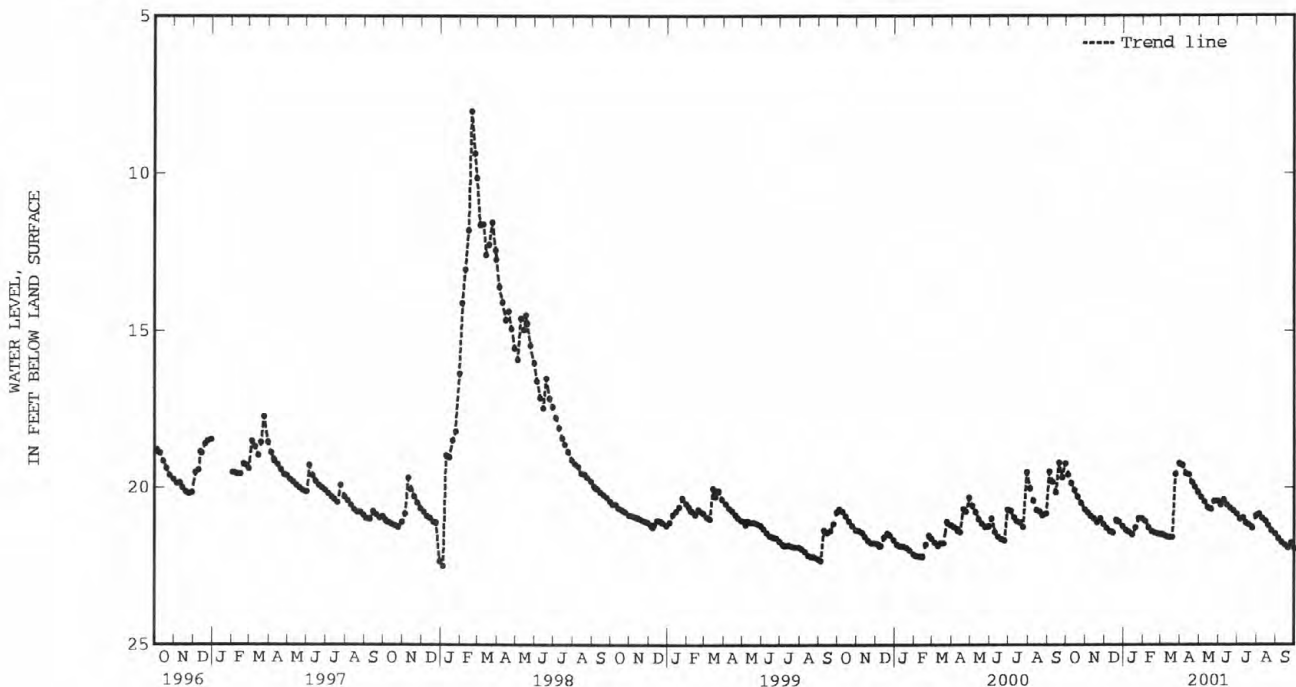
## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05	42.04	JAN 09	42.80	APR 30	41.87	JUL 11	41.70
WATER YEAR 2001		HIGHEST	41.70	JUL 11, 2001	LOWEST	42.80	JAN 09, 2001



## 79

382523078535501. Local number, 38P 1 SOW 070.



## GROUND-WATER LEVELS

## BUCHANAN COUNTY

370443082022301. Local number, 14E 40.

**LOCATION.**--Lat 37°04'43", long 82°02'22", NAD83, Hydrologic Unit 05070202, 50 ft south of the intersection of State Highways 620 and 622, at Grissom School. Owner: U.S. Geological Survey.

**AQUIFER.**--Jawbone coal bed of Norton Formation of Pennsylvanian age.

**WELL CHARACTERISTICS.**--Drilled unused water well, diameter 6 in., depth 60 ft, cased to 14 ft, open hole 14 to 60 ft.

**INSTRUMENTATION.**--Electronic data logger 15-minute record interval. June 1988 to September 1997, digital recorder 60-minute punch. October 1986 to June 1988, occasional measurement with chalked tape by USGS personnel. August 1982 to September 1983, digital recorder 60-minute punch.

**DATUM.**--Elevation of land-surface datum is 1,820 ft above sea level, from topographic map. Measuring point: Top of casing, 0.8 ft above land-surface datum prior to May 30, 1995; 6.74 thereafter.

**REMARKS.**--Missing record due to recorder malfunction.

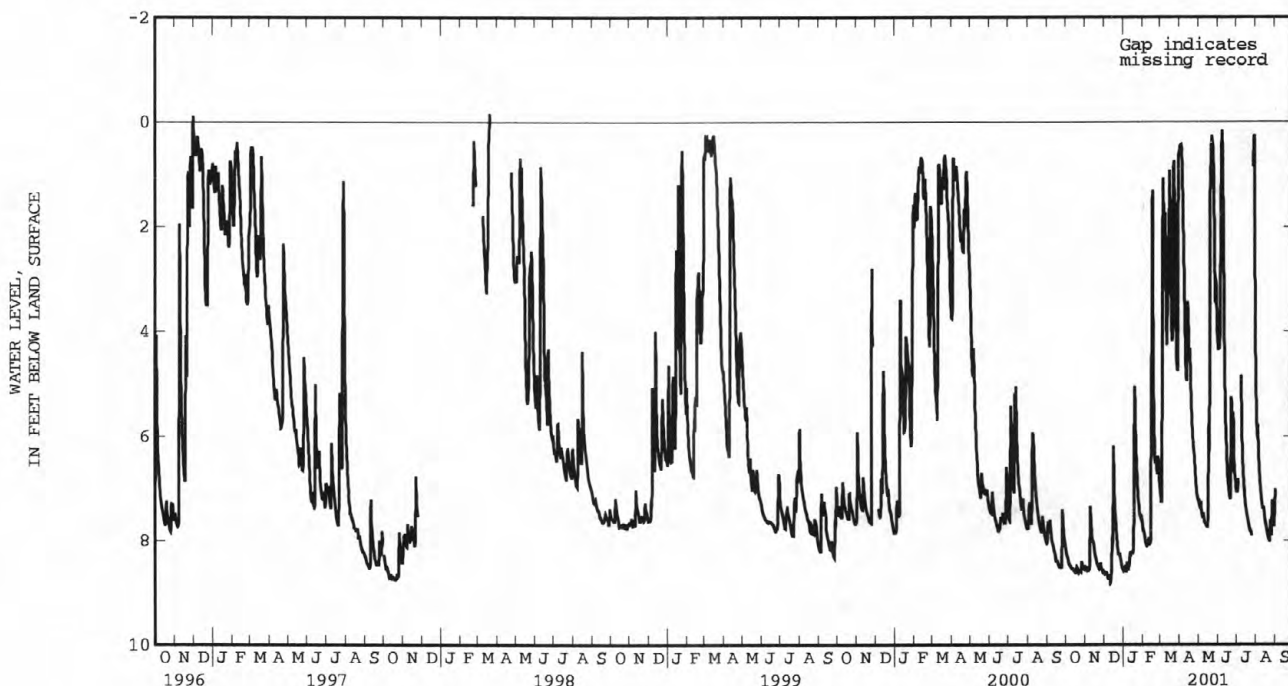
**PERIOD OF RECORD.**--August 1982 to September 1983, October 1986 to current year. Unpublished records available prior to October 1986 in files of the Geological Survey.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level recorded, 1.25 ft above land-surface datum, Apr. 17, 1998; lowest recorded, 11.49 ft below land-surface datum, Oct. 6, 1982.

**EXTREMES FOR CURRENT YEAR.**--Highest instantaneous water level, 0.63 ft above land-surface datum, Jul. 29; lowest instantaneous water level, 8.83 ft below land-surface datum, Dec. 12.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.35	8.58	8.65	8.57	7.94	2.21	.66	7.26	4.03	---	5.78	---
10	8.54	7.36	8.71	8.53	8.09	2.74	3.94	7.58	1.78	5.81	7.15	---
15	8.60	8.05	8.00	8.24	6.21	2.86	3.67	7.73	6.18	7.27	7.51	---
20	8.55	8.44	7.58	5.06	6.01	4.18	5.34	1.37	7.18	7.66	7.90	---
25	8.58	8.52	8.28	7.21	6.74	2.34	6.41	.47	6.69	7.89	7.85	---
EOM	8.56	8.62	8.55	7.60	6.87	.59	7.19	4.00	7.00	2.04	7.36	8.08





## GROUND-WATER LEVELS

81

## BUCKINGHAM COUNTY

372608078404601. Local number, 41H 3.

**LOCATION.**--Lat 37°26'09", long 78°40'45", NAD83, Hydrologic Unit 02080207, 0.85 mi west of Ranger Headquarters on south side of dirt road off State Highway 636, 1.5 mi south of Sliders. Owner: U.S. Geological Survey.

**AQUIFER.**--Metagraywacke, quartzose schist, and melange of Cambrian age.

**WELL CHARACTERISTICS.**--Augered observation water well, diameter 3 in. to 49 ft, diameter 1.25 in. from 49 to 54 ft, depth 54 ft, screened 49 to 54 ft.

**INSTRUMENTATION.**--Electronic pressure transducer data logger 60-minute record interval. October 1974 to June 12, 1998, occasional measurement with chalked tape by USGS personnel. August 1970 to October 1974, digital recorder 60-minute punch. Prior to August 1970, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 683.8 ft above sea level. Measuring point: Top of casing, 1.3 ft above land-surface datum.

**REMARKS.**--Prior to Oct. 1, 1981, well was reported as being located in Appomattox County.

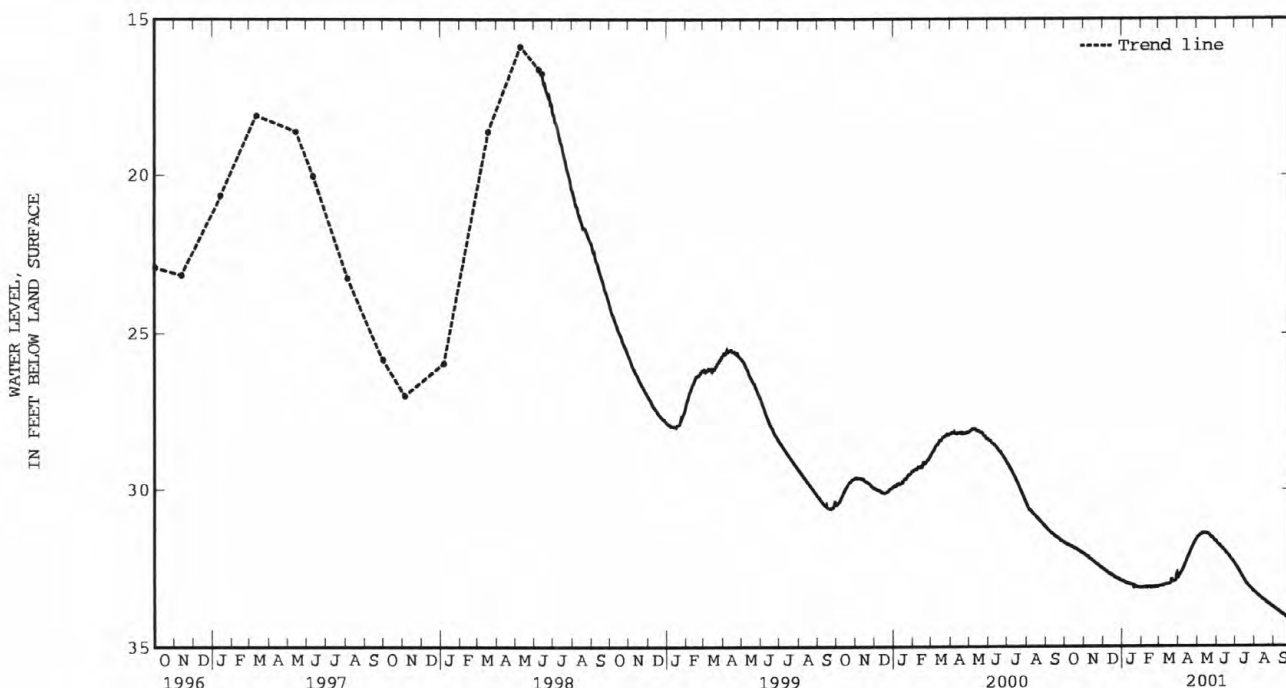
**PERIOD OF RECORD.**--March 1970 to current year. Unpublished records available prior to October 1977 in files of the Geological Survey.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level recorded, 7.31 ft below land-surface datum, Apr. 12, 1973; lowest recorded, 34.21 ft below land-surface datum, Sep. 30, 2001.

**EXTREMES FOR CURRENT YEAR.**--Highest instantaneous water level, 28.03 ft below land-surface datum, May 10; lowest instantaneous water level, 34.21 ft below land-surface datum, Sep. 30.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	31.75	32.12	32.59	32.95	33.13	33.08	32.71	31.50	31.78	32.52	33.36	33.84
10	31.81	32.21	32.66	33.00	33.13	33.06	32.51	31.43	31.88	32.69	33.44	33.92
15	31.85	32.28	32.73	33.03	33.12	33.03	32.28	31.41	31.98	32.87	33.52	33.99
20	31.90	32.36	32.80	33.07	33.11	33.00	32.05	31.46	32.11	33.02	33.60	34.06
25	31.97	32.43	32.85	33.12	33.10	32.95	31.83	31.55	32.24	33.13	33.67	34.14
EOM	32.05	32.52	32.92	33.15	33.10	32.69	31.65	31.67	32.36	33.26	33.76	34.21



## GROUND-WATER LEVELS

## CAROLINE COUNTY

380624077172801. Local number, 52N 5.

**LOCATION.**--Lat 38°06'24", long 77°17'27", NAD83, Hydrologic Unit 02080104, in block pumphouse under water tank at Camp Wilcox at Fort A. P. Hill, 1.1 mi north of U.S. Highway 301, and near Bowling Green. Owner: U.S. Department of the Army.

**AQUIFER.**--Middle Potomac aquifer of Cretaceous age.

**WELL CHARACTERISTICS.**--Drilled unused water well, diameter 6 in. to unknown depth, diameter 4 in. from unknown depth to 524 ft, depth 524 ft, screened 468 to 501 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by USGS personnel.

**DATUM.**--Elevation of land-surface datum is 210 ft above sea level, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum.

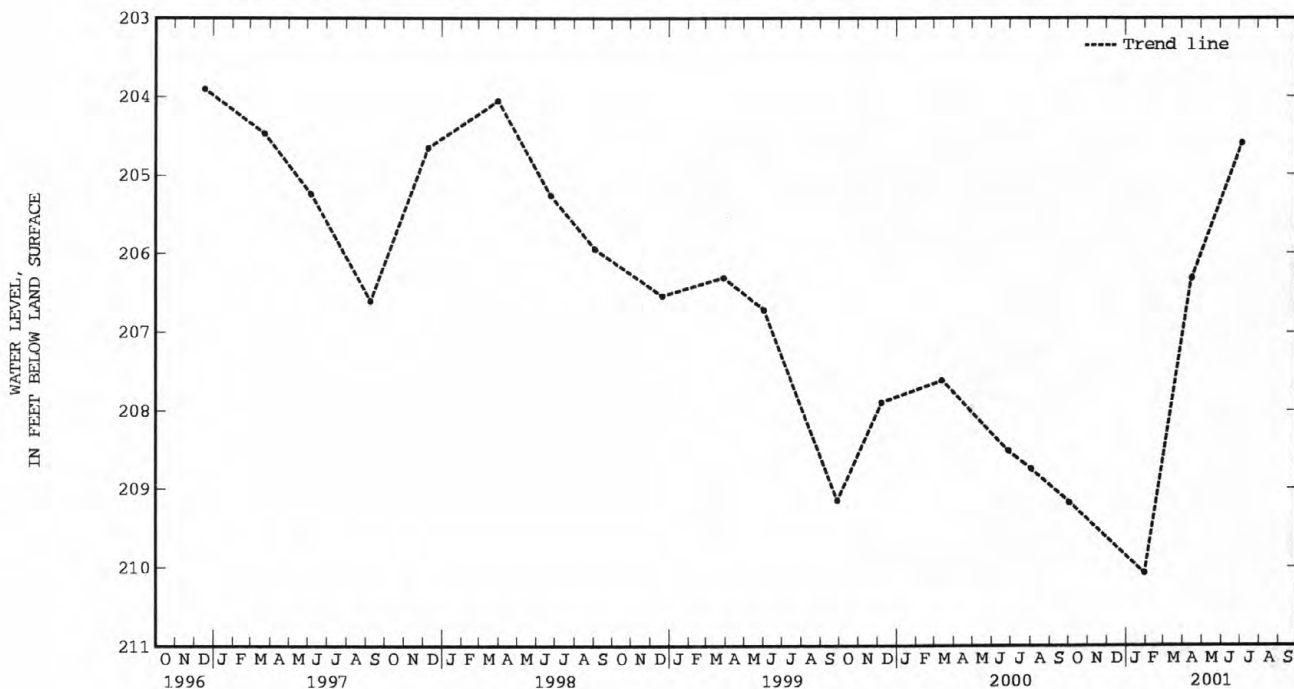
**REMARKS.**--Water level affected by regional drawdown.

**PERIOD OF RECORD.**--December 1971 to current year. Unpublished records available prior to October 1988 in files of the Geological Survey.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 172.20 ft below land-surface datum, Dec. 16, 1971; lowest measured, 210.08 ft below land-surface datum, Jan. 30, 2001.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 03	209.20	JAN 30	210.08	APR 16	206.32	JUL 05	204.60
WATER YEAR 2001		HIGHEST	204.60	JUL 05, 2001	LOWEST	210.08	JAN 30, 2001



## GROUND-WATER LEVELS

83

## CAROLINE COUNTY

380415077194101. Local number, 52N 6.

**LOCATION.**--Lat 38°04'15", long 77°19'40", NAD83, Hydrologic Unit 02080105, on the southwest corner of the intersection of Burke Street and Second Street in the headquarters area of Fort A. P. Hill near Bowling Green. Owner: U.S. Department of the Army.

**AQUIFER.**--Lower Potomac aquifer of Cretaceous age.

**WELL CHARACTERISTICS.**--Drilled unused water well, diameter 6 in. to 480 ft, diameter 3 in. from 446 to 500 ft, depth 500 ft, screened 488 to 498 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by USGS personnel.

**DATUM.**--Elevation of land-surface datum is 214 ft above sea level, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum.

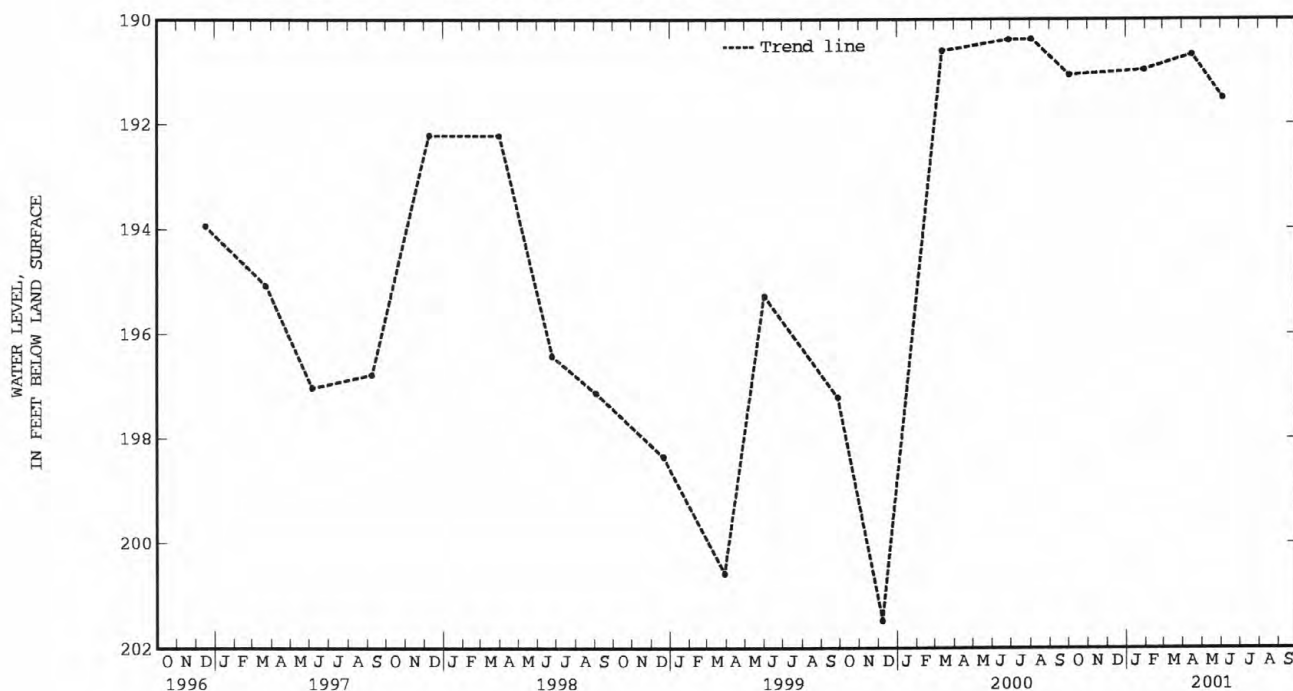
**REMARKS.**--Water level affected by regional drawdown.

**PERIOD OF RECORD.**--December 1971 to current year. Unpublished records available prior to October 1988 in files of the Geological Survey.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 158.65 ft below land-surface datum, Feb. 10, 1982; lowest measured, 207.74 ft below land-surface datum, Mar. 19, 1986.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 03	191.07	JAN 30	190.97	APR 16	190.68	JUN 05	191.52
WATER YEAR 2001		HIGHEST	190.68	APR 16, 2001		LOWEST	191.52
							JUN 05, 2001



## GROUND-WATER LEVELS

## CAROLINE COUNTY

375922077142901. Local number, 53M 1.

**LOCATION.**--Lat 37°59'22", long 77°14'28", NAD83, Hydrologic Unit 02080105, at Sparta Volunteer Fire Co., 200 ft south of State Highway 721 and 50 ft west of Maracossic Creek. Owner: U.S. Geological Survey.

**AQUIFER.**--Aquia aquifer of Pliocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 2 in., depth 110.75 ft, screened 100.75 ft to 110.75 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by USGS personnel. Prior to October 1998, monthly measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 89 ft above sea level, from topographic map. Measuring point: Top of casing, 0.75 ft above land-surface datum.

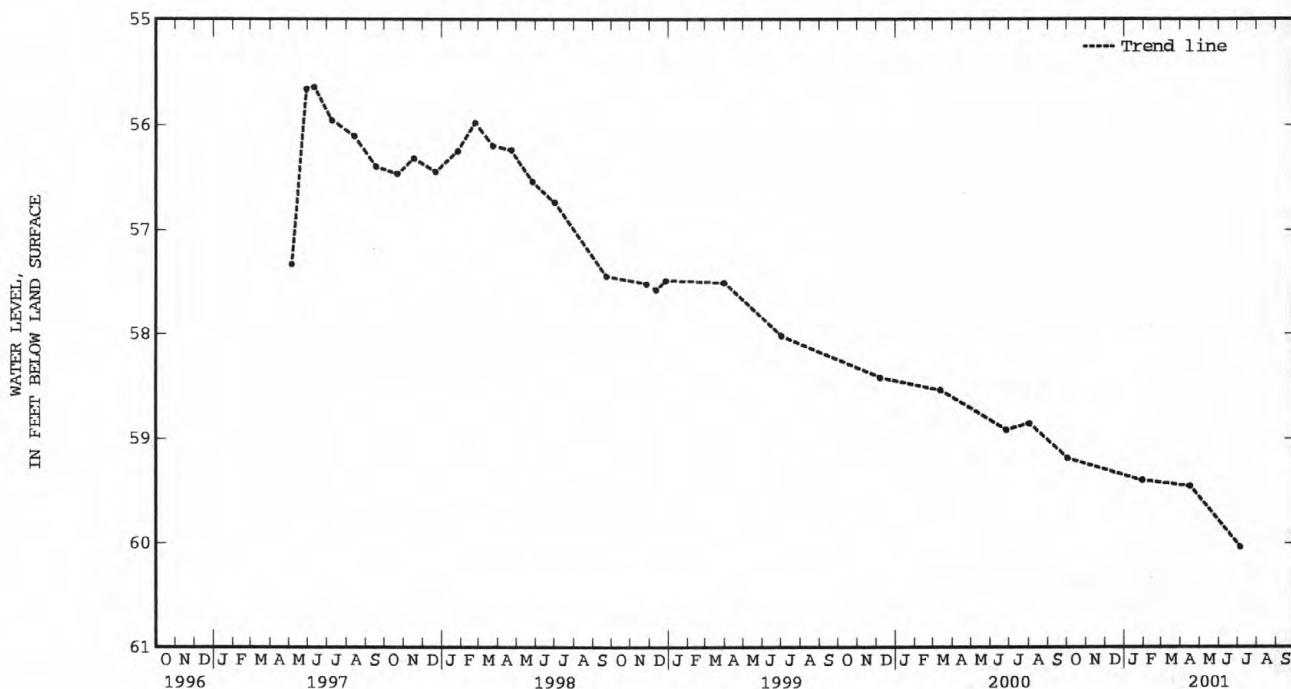
**REMARKS.**--Well drilled as part of Fall Zone ground-water study. Water level affected by regional drawdown.

**PERIOD OF RECORD.**--May 1997 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 55.64 ft below land-surface datum, Jun. 11, 1997; lowest measured, 60.04 ft below land-surface datum, Jul. 5, 2001.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 03	59.19	JAN 30	59.40	APR 16	59.45	JUL 05	60.04
WATER YEAR 2001		HIGHEST	59.19	OCT 03, 2000	LOWEST	60.04	JUL 05, 2001



## GROUND-WATER LEVELS

85

## CHARLES CITY COUNTY

371956076055101. Local number, 54G 13 SOW 067.

**LOCATION.**--Lat 37°19'57", long 77°05'50", NAD83, Hydrologic Unit 02080206, 0.6 mi east of Bowens Store on State Highway 5, 1.6 mi southwest of Charles City. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Middle Potomac aquifer of Cretaceous age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 2 in., depth 227 ft, screened 222 to 227 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sep. 30, 1985, to Jul. 10, 1995, bimonthly measurement with chalked tape. Prior to Sep. 30, 1985, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 35 ft above sea level, from topographic map. Measuring point: Top of casing, 2.4 ft above land-surface datum.

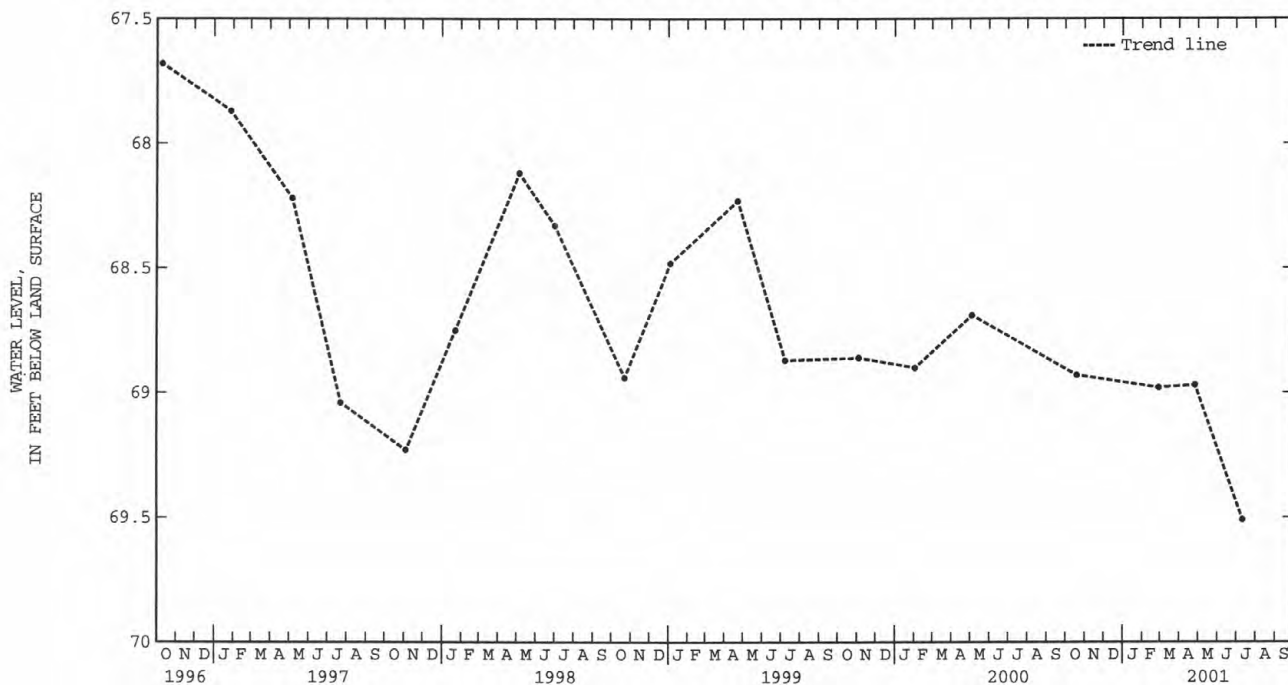
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

**PERIOD OF RECORD.**--June 1973 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 44.63 ft below land-surface datum, Jun. 7, 1973; lowest measured, 69.51 ft below land-surface datum, Jul. 11, 2001.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 19	68.93	FEB 27	68.98	APR 26	68.97	JUL 11	69.51
WATER YEAR 2001		HIGHEST	68.93	OCT 19, 2000	LOWEST	69.51	JUL 11, 2001





## GROUND-WATER LEVELS

## CITY OF CHESAPEAKE

364852076252201. Local number, 59C 29 SOW 163A.

**LOCATION.**--Lat 36°48'53", long 76°25'21", NAD83, Hydrologic Unit 02080208, 0.7 mi southeast of intersection of State Highways 191 and 337 in Chesapeake. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Columbia aquifer of Quaternary age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 35 ft, screened 25 to 35 ft.

**INSTRUMENTATION.**--Biweekly measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Aug. 21, 1985 to Oct. 9, 1996, bimonthly measurement with chalked tape. Prior to Aug. 21, 1985, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 15 ft above sea level, from topographic map. Measuring point: Top of casing, 0.9 ft above land-surface datum, prior to Mar. 11, 1996; 2.45 ft Mar. 12, 1996 to May 28, 1998; 3.74 ft thereafter.

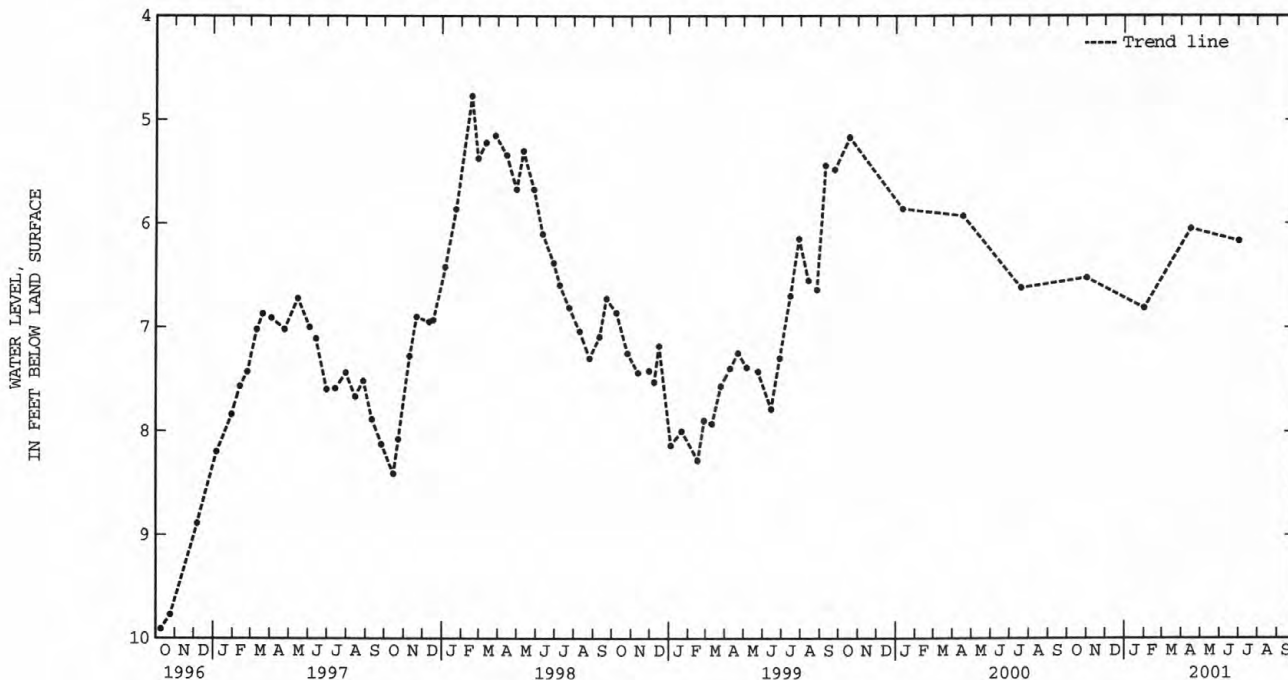
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division.

**PERIOD OF RECORD.**--November 1981 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 2.70 ft below land-surface datum, Mar. 14, 1989; lowest measured, 18.39 ft below land-surface datum, Nov. 5, 1991.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 01	6.52	FEB 01	6.81	APR 16	6.05	JUL 02	6.17
WATER YEAR 2001		HIGHEST	6.05	APR 16, 2001		LOWEST	6.81
						FEB 01, 2001	



## GROUND-WATER LEVELS

87

## CITY OF CHESAPEAKE

364852076252202. Local number, 59C 30 SOW 163B.

**LOCATION.**--Lat 36°48'53", long 76°25'21", NAD83, Hydrologic Unit 02080208, 0.7 mi southeast of intersection of State Highways 191 and 337 in Chesapeake. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Middle Potomac aquifer of Cretaceous age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 2 in., depth 948 ft, screened 938 to 948 ft.

**INSTRUMENTATION.**--Biweekly measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Aug. 21, 1985 to Oct. 9, 1996, bimonthly measurement with chalked tape. Prior to Aug. 21, 1985, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 15 ft above sea level, from topographic map. Measuring point: Top of casing, 0.8 ft above land-surface datum, prior to Mar. 11, 1996; 2.47 ft thereafter.

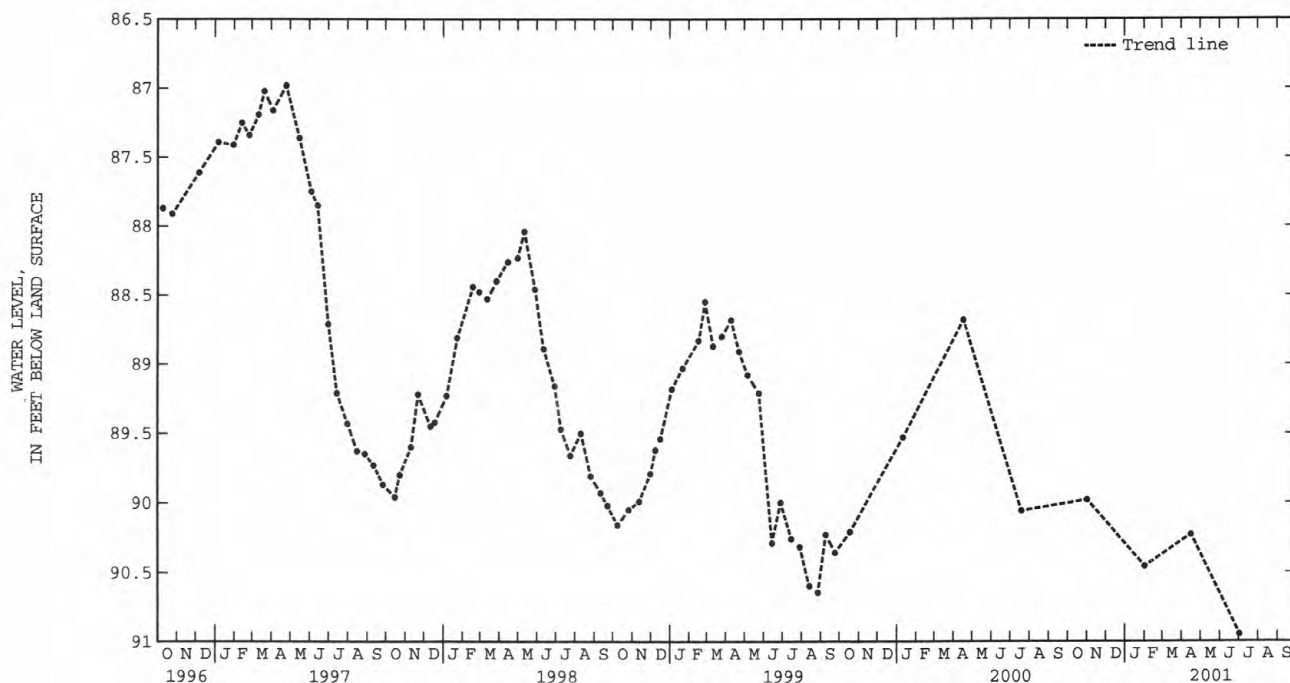
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

**PERIOD OF RECORD.**--November 1981 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 67.06 ft below land-surface datum, May 25, 1983; lowest measured, 91.51 ft below land-surface datum, Oct. 11, 1995.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 01	89.98	FEB 01	90.46	APR 16	90.23	JUL 02	90.95
WATER YEAR 2001		HIGHEST	89.98	NOV 01, 2000		LOWEST	90.95 JUL 02, 2001



## GROUND-WATER LEVELS

## CITY OF CHESAPEAKE

364852076252203. Local number, 59C 31 SOW 163C.

**LOCATION.**--Lat 36°48'53", long 76°25'21", NAD83, Hydrologic Unit 02080208, 0.7 mi southeast of intersection of State Highways 191 and 337 in Chesapeake. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Brightseat-upper Potomac aquifer of Cretaceous-Paleocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 2 in., depth 631 ft, screened 621 to 631 ft.

**INSTRUMENTATION.**--Biweekly measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Aug. 21, 1985 to Oct. 9, 1996, bimonthly measurement with chalked tape. Prior to Aug. 21, 1985, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 15 ft above sea level, from topographic map. Measuring point: Top of casing, 1.2 ft above land-surface datum, prior to Mar. 11, 1996; 2.88 ft thereafter.

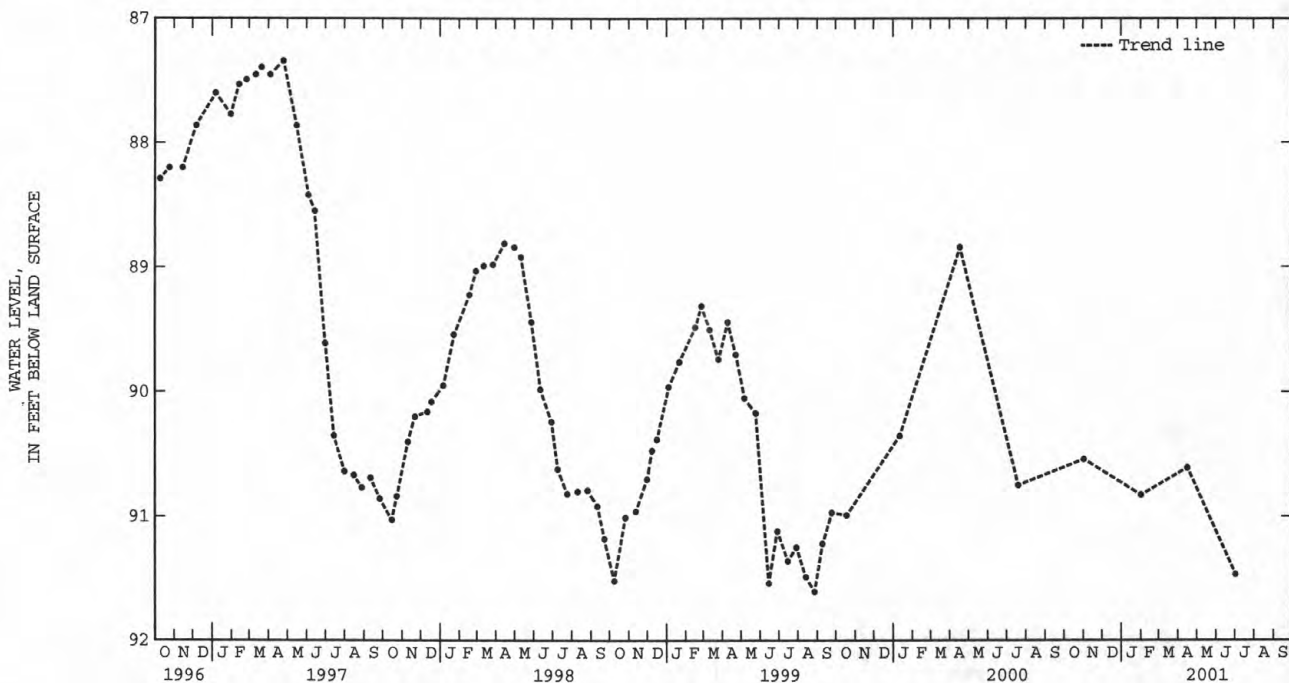
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

**PERIOD OF RECORD.**--November 1981 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 67.13 ft below land-surface datum, Feb. 23, 1983; lowest measured, 94.12 ft below land-surface datum, Oct. 11, 1995.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 01	90.54	FEB 01	90.83	APR 16	90.61	JUL 02	91.47
WATER YEAR 2001		HIGHEST	90.54	NOV 01, 2000		LOWEST	91.47 JUL 02, 2001



## GROUND-WATER LEVELS

89

## CITY OF CHESAPEAKE

363836076201701. Local number, 60B 3 SOW 090A.

**LOCATION.**--Lat 36°38'37", long 76°20'16", NAD83, Hydrologic Unit 03010205, 0.15 mi north of intersection of Benefit and West Roads, 1.5 mi north of Cornland. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Brightseat-upper Potomac aquifer of Cretaceous-Paleocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 855 ft, screened 824 to 834 ft.

**INSTRUMENTATION.**-- Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Aug. 25, 1985 to Oct. 12, 1995, continuous strip-chart recorder. Prior to Aug. 25, 1985, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 16 ft above sea level, from topographic map. Measuring point: Top of casing, 1.0 ft above land-surface datum.

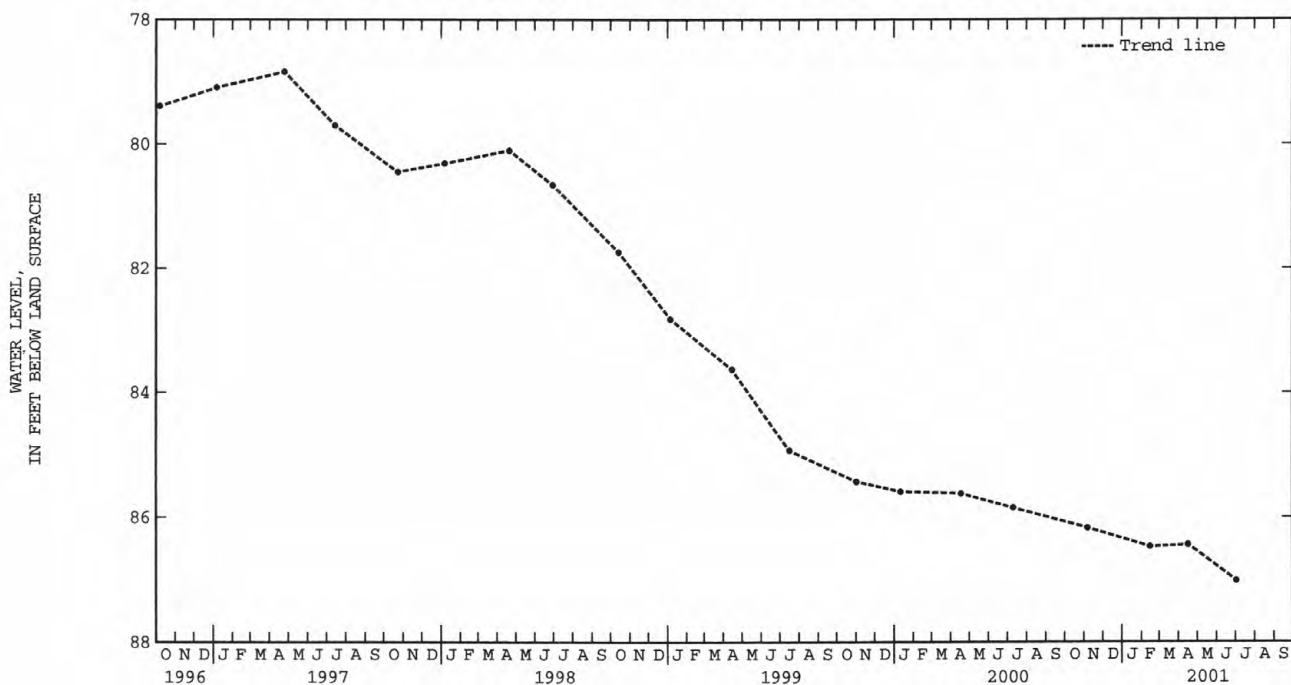
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

**PERIOD OF RECORD.**--July 1978 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 53.80 ft below land-surface datum, Jul. 11, 1978; lowest recorded, 87.02 ft below land-surface datum, Jul. 2, 2001.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 06	86.17	FEB 14	86.47	APR 16	86.44	JUL 02	87.02
WATER YEAR 2001		HIGHEST	86.17	NOV 06, 2000		LOWEST	87.02 JUL 02, 2001



## GROUND-WATER LEVELS

## CITY OF CHESAPEAKE

363836076201702. Local number, 60B 4 SOW 090B.

**LOCATION.**--Lat 36°38'37", long 76°20'16", NAD83, Hydrologic Unit 03010205, 0.15 mi north of intersection of Benefit and West Roads, 1.5 mi north of Cornland. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Virginia Beach aquifer of Cretaceous age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 556 ft, screened 525 to 535 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 9, 1985, to Jul. 6, 1995, bimonthly measurement with chalked tape. Prior to Oct. 9, 1985, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 16 ft above sea level, from topographic map. Measuring point: Top of casing, 2.05 ft above land-surface datum prior to Mar. 2, 1988; 1.2 ft thereafter.

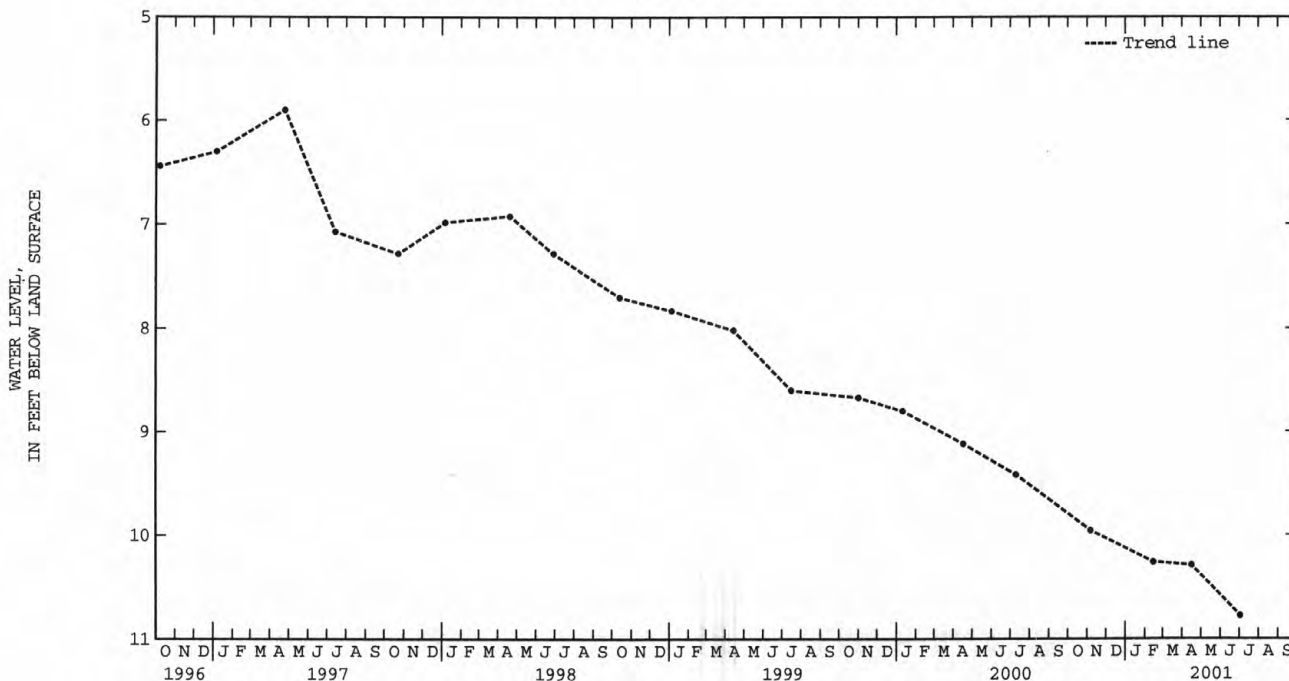
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

**PERIOD OF RECORD.**--February 1978 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 2.20 ft above land-surface datum, Feb. 1, 1978; lowest measured, 10.78 ft below land-surface datum, Jul. 2, 2001.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 06	9.96	FEB 14	10.26	APR 16	10.29	JUL 02	10.78
WATER YEAR 2001		HIGHEST	9.96	NOV 06, 2000		LOWEST	10.78 JUL 02, 2001





## GROUND-WATER LEVELS

91

## CITY OF CHESAPEAKE

364615076182101. Local number, 60C 41 SOW 164.

**LOCATION.**--Lat 36°46'16", long 76°18'20", NAD83, Hydrologic Unit 02080208, 50 ft north of entrance road to Virginia Power powerplant, 500 ft south of Military Highway in Chesapeake. Owner: Virginia Power.

**AQUIFER.**--Brightseat-upper Potomac aquifer of Cretaceous-Paleocene age.

**WELL CHARACTERISTICS.**--Drilled unused water well, diameter 6 in. to 400 ft, diameter 4 in. from 400 to 928 ft, depth 928 ft, screened 770 to 780 ft, 875 to 885 ft, 918 to 928 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Nov. 25, 1982 to Oct. 12, 1995, continuous strip-chart recorder. Prior to Nov. 25, 1982, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 10 ft above sea level, from topographic map. Measuring point: Top of casing, 1.6 ft above land-surface datum prior to Jul. 15, 1987; 1.5 ft thereafter.

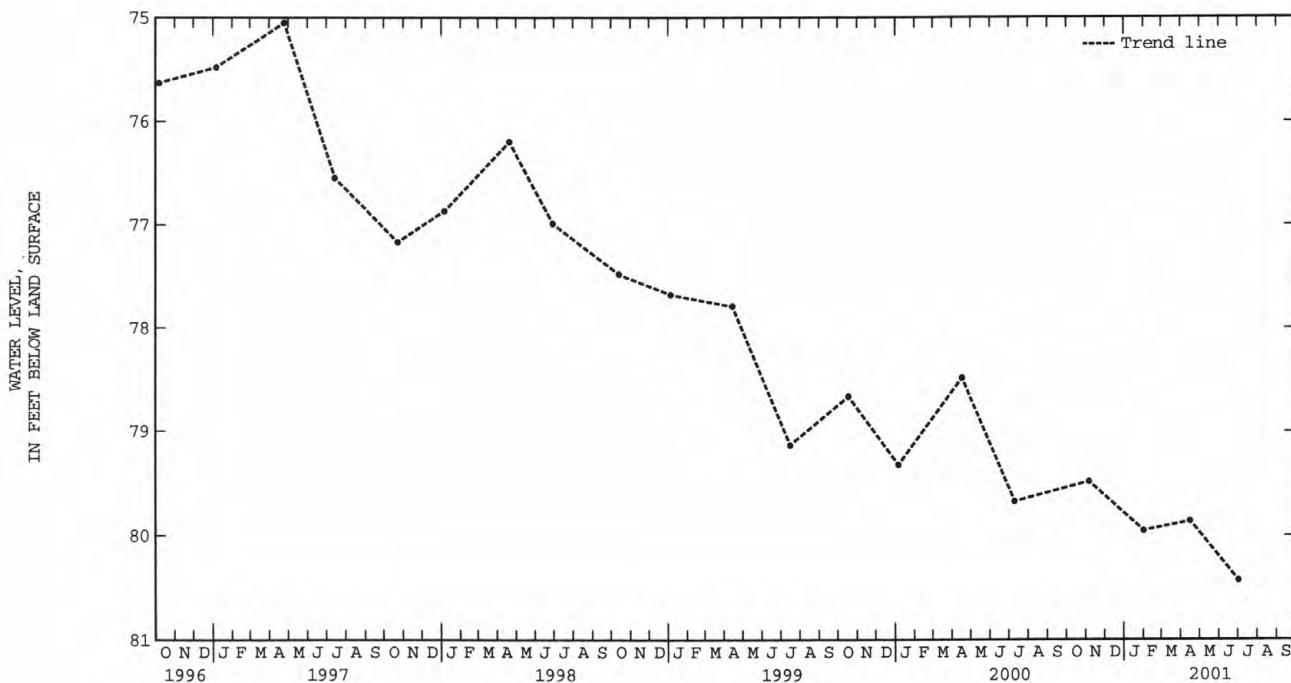
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

**PERIOD OF RECORD.**--February 1982 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level recorded, 55.22 ft below land-surface datum, Mar. 15, 1983; lowest recorded, 80.43 ft below land-surface datum, Jul. 2, 2001.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 06	79.48	FEB 01	79.95	APR 16	79.86	JUL 02	80.43
WATER YEAR 2001		HIGHEST	79.48	NOV 06, 2000		LOWEST	80.43 JUL 02, 2001



## GROUND-WATER LEVELS

## CITY OF CHESAPEAKE

364227076074702. Local number, 61B 5 SOW 091B.

**LOCATION.**--Lat 36°42'28", long 76°07'46", NAD83, Hydrologic Unit 03010205, 300 ft south of Lockheed Avenue, 0.7 mi east of intersection of State Highway 165 and Lockheed Avenue, and 3.8 mi east of Pentress. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Brightseat-upper Potomac aquifer of Cretaceous-Paleocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 1,060 ft, screened 1,040 to 1,060 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 9, 1985, to Jul. 6, 1995, bimonthly measurement with chalked tape. Prior to Oct. 9, 1985, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 15 ft above sea level, from topographic map. Measuring point: Top of casing, 1.5 ft above land-surface datum.

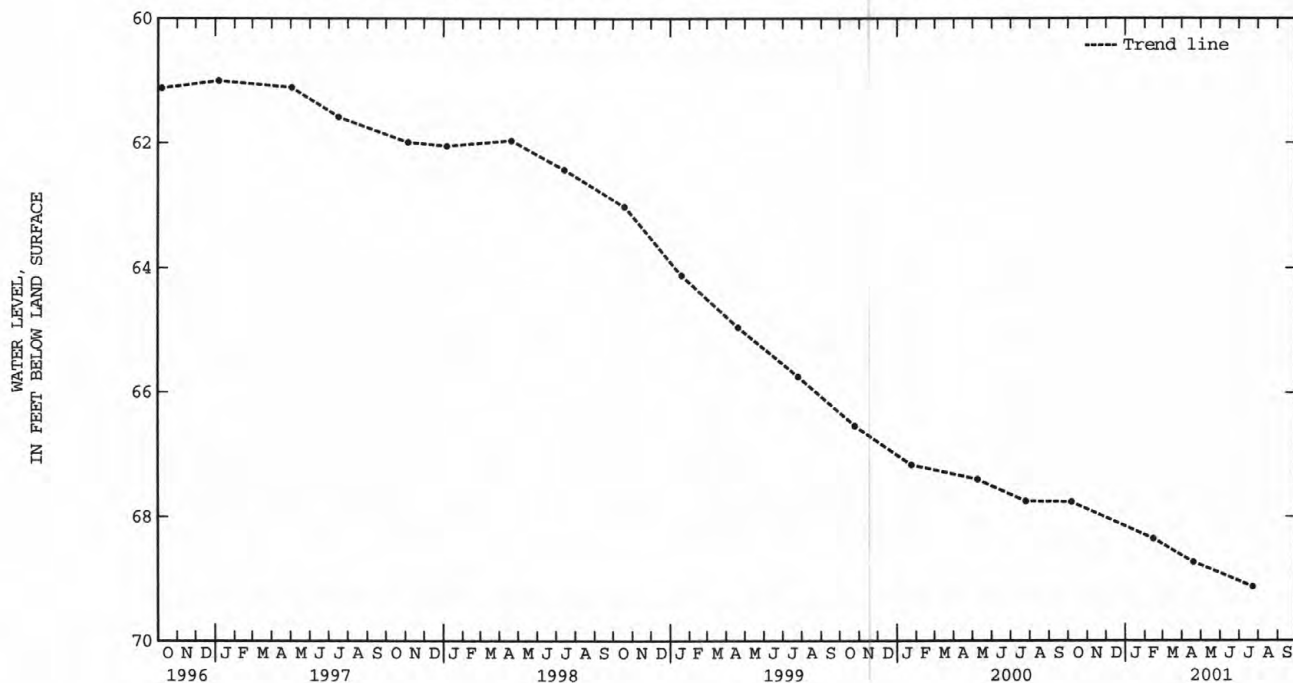
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

**PERIOD OF RECORD.**--June 1979 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 27.83 ft below land-surface datum, Aug. 28, 1980; lowest measured, 69.13 ft below land-surface datum, Jul. 23, 2001.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 06	67.76	FEB 14	68.35	APR 19	68.73	JUL 23	69.13
WATER YEAR 2001		HIGHEST	67.76	OCT 06, 2000	LOWEST	69.13	JUL 23, 2001



# GROUND-WATER LEVELS

93

## CITY OF CHESAPEAKE

364227076074703. Local number, 61B 6 SOW 091C.

**LOCATION.**--Lat 36°42'28", long 76°07'46", NAD83, Hydrologic Unit 03010205, 300 ft south of Lockheed Avenue, 0.7 mi east of intersection of State Highway 165 and Lockheed Avenue, and 3.8 mi east of Pentress. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Virginia Beach aquifer of Cretaceous age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 780 ft, screened 760 to 780 ft.

**INSTRUMENTATION.**--Occasional measurement with manometer or chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 9, 1985, to Jul. 6, 1995, bimonthly measurement with chalked tape. Prior to Oct. 9, 1985, occasional measurement with manometer.

**DATUM.**--Elevation of land-surface datum is 15 ft above sea level, from topographic map. Measuring point: Top of casing, 7.0 ft above land-surface datum prior to Jan. 11, 1989; 1.2 ft thereafter.

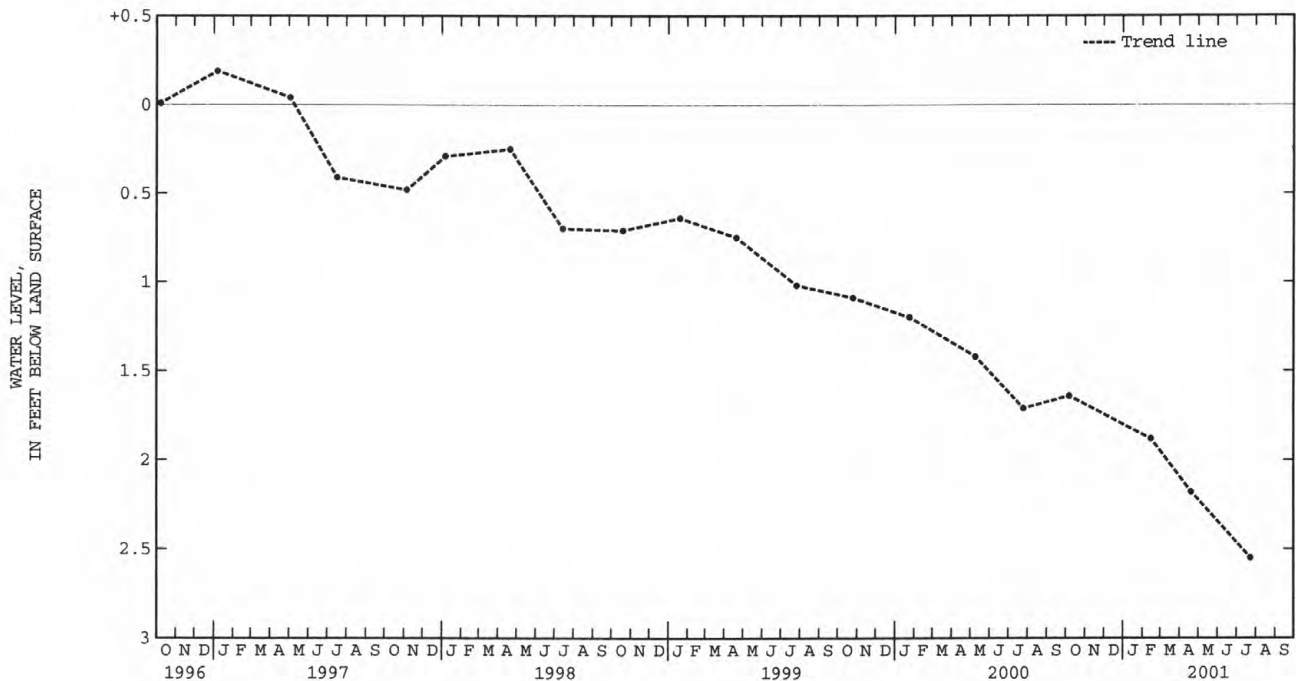
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown. Water from this well is known to contain concentrations of dissolved solids greater than 1,000 mg/L.

**PERIOD OF RECORD.**--July 1979 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 6.37 ft above land-surface datum, Jul. 26, 1979; lowest measured, 2.55 ft below land-surface datum, Jul. 23, 2001.

### WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 06	1.64	FEB 14	1.88	APR 19	2.18	JUL 23	2.55
WATER YEAR 2001		HIGHEST	1.64	OCT 06, 2000	LOWEST	2.55	JUL 23, 2001



## GROUND-WATER LEVELS

## CITY OF CHESAPEAKE

364231076140801. Local number, 61B 8 SOW 134.

**LOCATION.**--Lat 36°42'32", long 76°14'07", NAD83, Hydrologic Unit 03010205, at Great Bridge Junior High School, in Great Bridge. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--St. Marys-Choptank aquifer of Miocene age.

**WELL CHARACTERISTICS.**--Drilled unused water well, diameter 8 in., depth 100 ft, screened 84 to 94 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 9, 1985, to Jul. 5, 1995, bimonthly measurement with chalked tape. Prior to Oct. 9, 1985, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 20 ft above sea level, from topographic map. Measuring point:

Top of casing, 0.8 ft above land-surface datum.

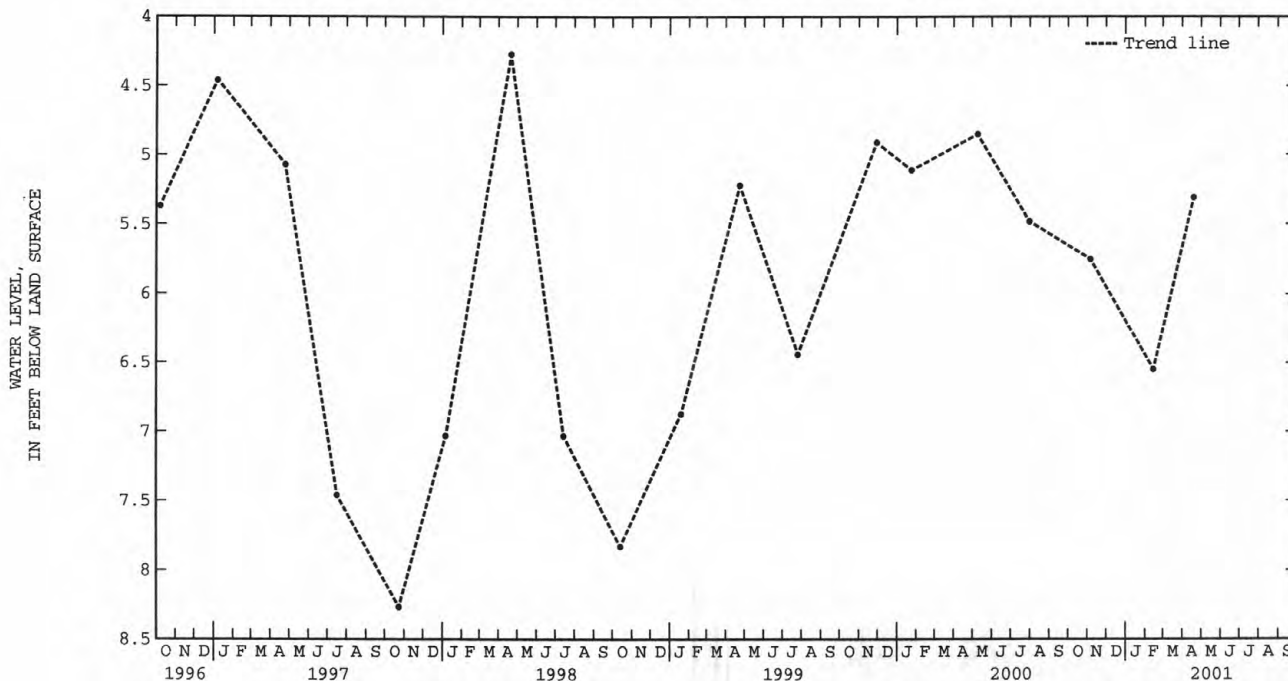
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division.

**PERIOD OF RECORD.**--January 1979 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 3.80 ft below land-surface datum, Apr. 14, 1993; lowest measured, 16.07 ft below land-surface datum, Sep. 18, 1980.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL		
NOV 06	5.75	FEB 14	6.55	APR 19	5.31		
WATER YEAR 2001		HIGHEST	5.31	APR 19, 2001	LOWEST	6.55	FEB 14, 2001



## GROUND-WATER LEVELS

95

## CITY OF CHESAPEAKE

364227076074706. Local number, 61B 12 SOW 091E.

**LOCATION.**--Lat 36°42'28", long 76°07'46", NAD83, Hydrologic Unit 03010205, 300 ft south of Lockheed Avenue, 0.7 mi east of intersection of State Highway 165 and Lockheed Avenue, and 3.8 mi east of Fentress. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Lower Potomac aquifer of Cretaceous age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in. to 1,630 ft, diameter 2 in. from 1,630 to 1,830 ft, depth 1,830 ft, screened 1,820 to 1,830 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to Jul. 6, 1995, bimonthly measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 15 ft above sea level, from topographic map. Measuring point: Top of casing, 1.4 ft above land-surface datum.

**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown. Low water-level drawdown after April 1998 is the result of pumping of the well. Cause of nonrecovery to pre-pumpage level is unknown. Water from this well is known to contain concentrations of dissolved solids greater than 1,000 mg/L.

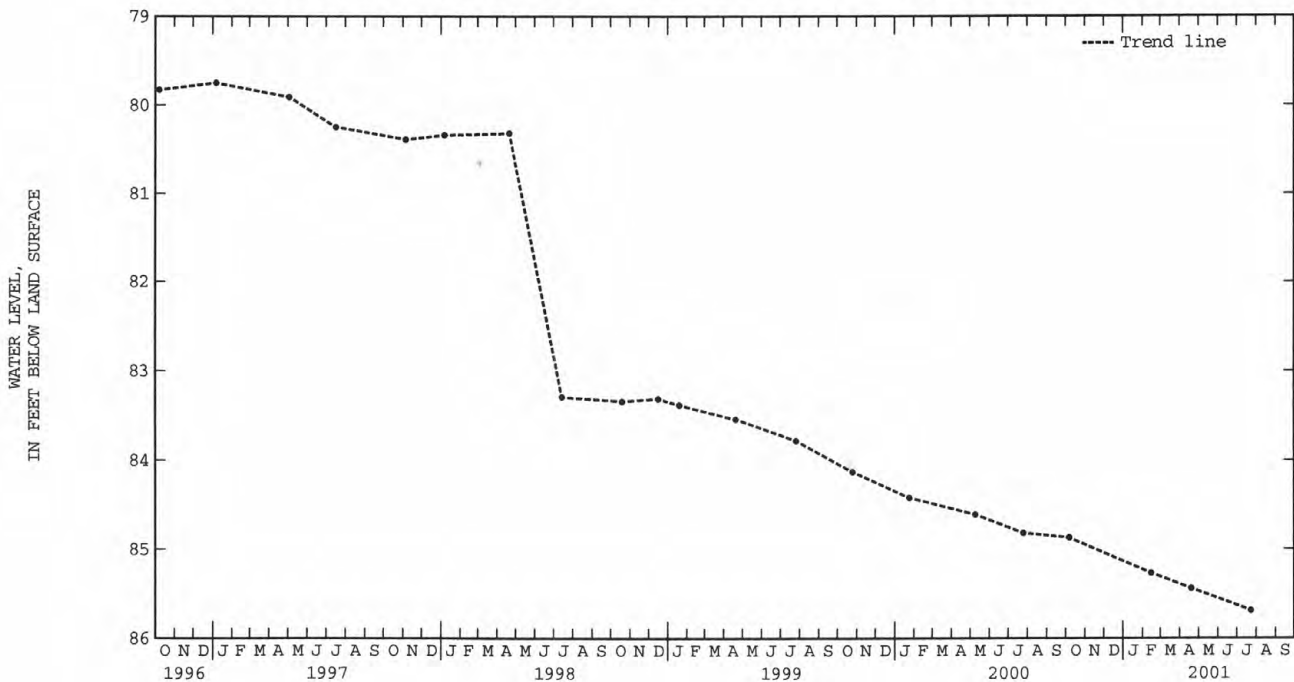
**PERIOD OF RECORD.**--March 1989 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 41.50 ft below land-surface datum, Jun. 21, 1989; lowest measured, 85.69 ft below land-surface datum, Jul. 23, 2001.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 06	84.87	FEB 14	85.27	APR 19	85.44	JUL 23	85.69

WATER YEAR 2001	HIGHEST	84.87	OCT 06, 2000	LOWEST	85.69	JUL 23, 2001
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## CITY OF CHESAPEAKE

364227076074707. Local number, 61B 13 SOW 091F.

**LOCATION.**--Lat 36°42'28", long 76°07'46", NAD83, Hydrologic Unit 03010205, 300 ft south of Lockheed Avenue, 0.7 mi east of intersection of State Highway 165 and Lockheed Avenue, and 3.8 mi east of Pentress. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Middle Potomac aquifer of Cretaceous age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in. to 1,270 ft, diameter 2 in. from 1,270 to 1,390 ft, depth 1,390 ft, screened 1,370 to 1,380 ft.

**INSTRUMENTATION.**--Continuous strip-chart recorder. Jul. 6, 1995 to Feb. 13, 1997, occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to Jul. 6, 1995, bimonthly measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 15 ft above sea level, from topographic map. Measuring point: Top of casing, 1.1 ft above land-surface datum.

**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown. Water from this well is known to contain concentrations of dissolved solids greater than 1,000 mg/L. Missing record due to recorder malfunction.

**PERIOD OF RECORD.**--March 1989 to current year.

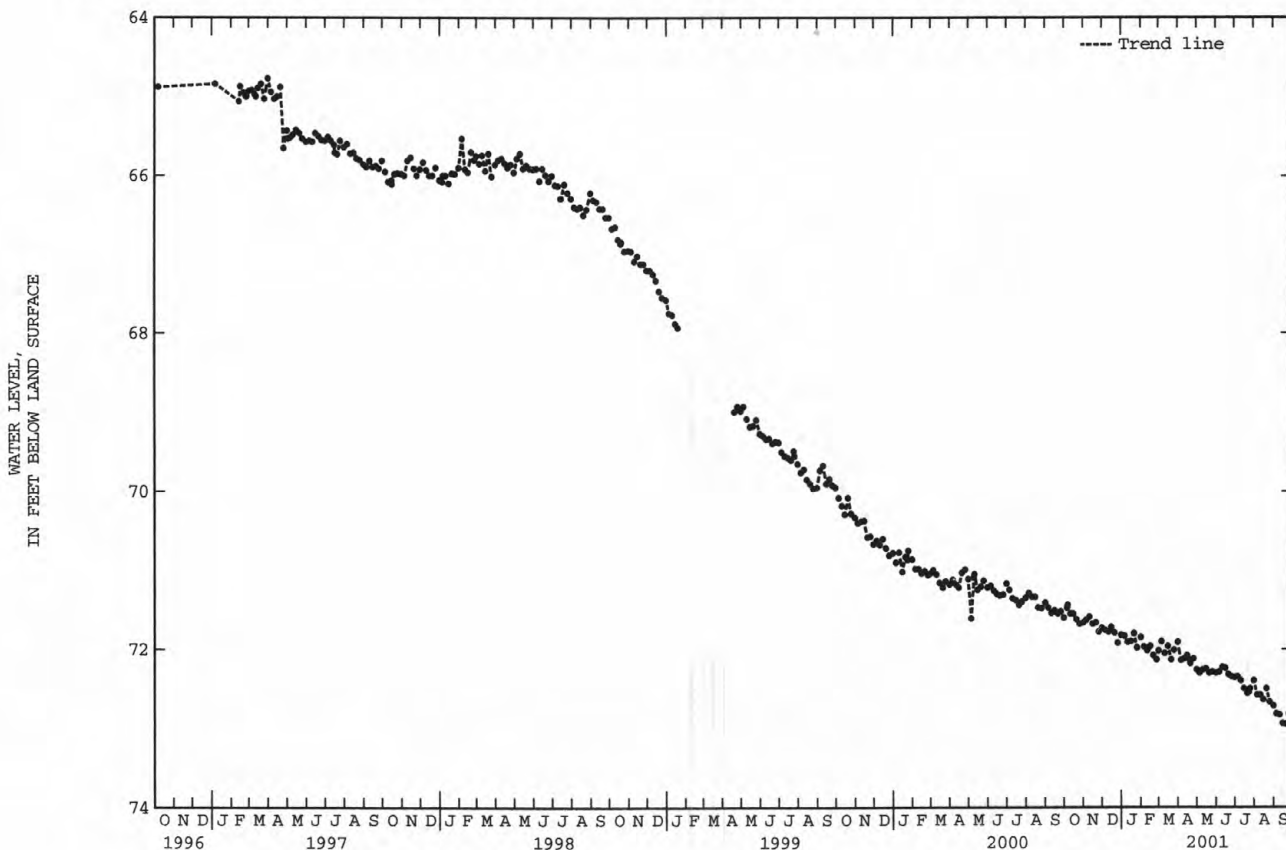
**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 49.00 ft below land-surface datum, Aug. 10, 1989; lowest measured, 72.96 ft below land-surface datum, Sep. 16, 17, 2001.

**EXTREMES FOR CURRENT YEAR.**--Highest instantaneous water level, 71.41 ft below land-surface datum, Oct. 6; lowest instantaneous water level, 72.96 ft below land-surface datum, Sep. 16, 17.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	71.47	71.63	71.76	71.83	71.97	71.90	72.14	72.30	72.29	72.35	72.58	72.82
10	71.55	71.59	71.78	71.91	72.02	72.05	72.12	72.26	72.23	72.40	72.58	72.83
15	71.55	71.68	71.72	71.90	71.96	71.96	72.08	72.25	72.24	72.50	72.64	72.94
20	71.62	71.66	71.79	71.80	72.08	72.13	72.18	72.30	72.32	72.56	72.50	72.95
25	71.68	71.78	71.92	71.98	72.13	72.01	72.12	72.29	72.35	72.50	72.67	72.82
EOM	71.66	71.73	71.82	71.85	72.02	71.91	72.26	72.30	72.36	72.40	72.72	72.93

WATER YEAR 2001	HIGHEST	71.44	OCT 06, 2000	LOWEST	72.95	SEP 20, 2001
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## CITY OF CHESAPEAKE

**LOCATION.**--Lat 36°42'28", long 76°07'46", NAD83, Hydrologic Unit 03010205, 300 ft south of Lockheed Avenue, 0.7 mi east of intersection of State Highway 165 and Lockheed Avenue, and 3.8 mi east of Fentress. Owner: Virginia Department of Environmental Quality.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in. to 987 ft, diameter 2 in. from 987 to 1,110 ft, depth 1,110 ft, screened 1,090 to 1,100 ft.

**INSTRUMENTATION.**--Continuous strip-chart recorder. Jul. 6, 1995 to Feb. 13, 1997, occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to Jul. 6, 1995, bimonthly measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 15 ft above sea level, from topographic map. Measuring point: Top of casing, 0.9 ft above land-surface datum.

**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown. Water from this well is known to contain concentrations of dissolved solids greater than 1,000 mg/L.

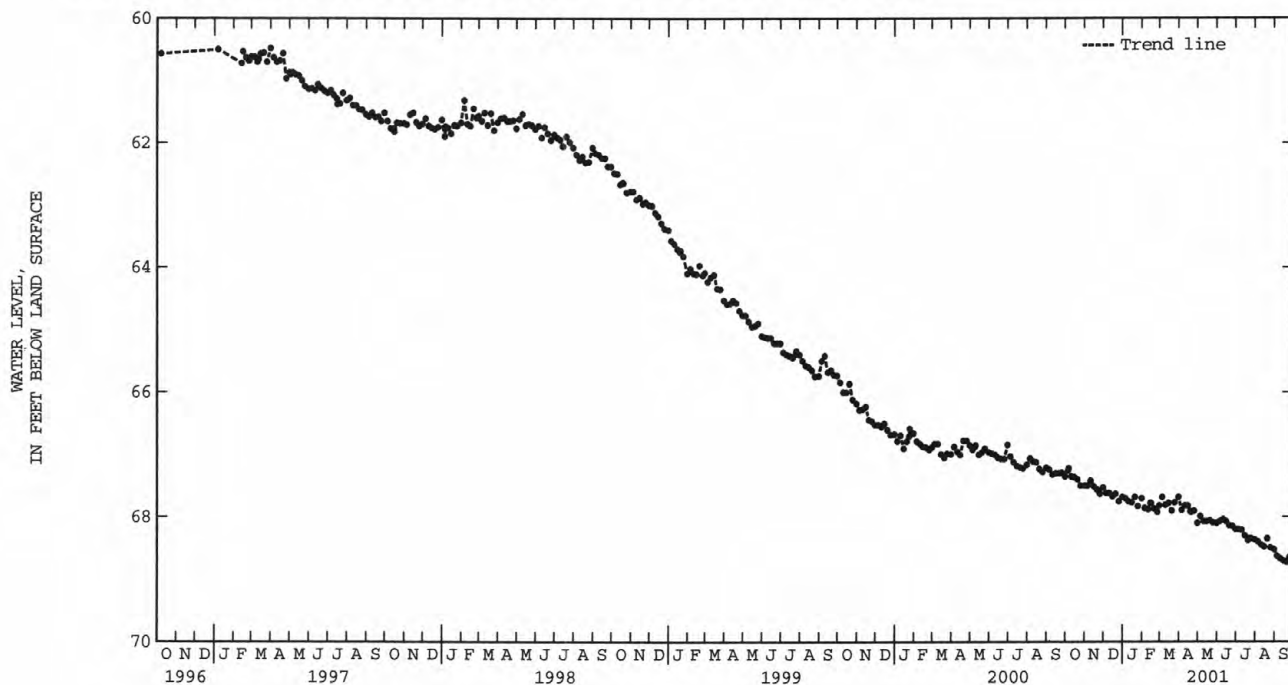
**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 51.30 ft below land-surface datum, Mar. 22, 1989; lowest measured, 68.77 ft below land-surface datum, Sep. 30, 2001.

**EXTREMES FOR CURRENT YEAR.**--Highest instantaneous water level, 67.22 ft below land-surface datum, Oct. 6; lowest instantaneous water level, 68.77 ft below land-surface datum, Sep. 30, 2001.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	67.25	67.50	67.62	67.70	67.86	67.68	67.89	67.99	68.07	68.20	68.40	68.63
10	67.35	67.42	67.62	67.75	67.88	67.81	67.82	68.07	68.04	68.21	68.45	68.67
15	67.36	67.51	67.67	67.77	67.78	67.78	67.82	68.07	68.07	68.30	68.48	68.71
20	67.40	67.56	67.63	67.68	67.87	67.90	67.92	68.06	68.14	68.38	68.35	68.73
25	67.50	67.63	67.75	67.83	67.92	67.77	67.90	68.09	68.15	68.35	68.50	68.65
BOM	67.50	67.53	67.68	67.70	67.82	67.68	68.10	68.10	68.20	68.37	68.53	68.77

WATER YEAR 2001	HIGHEST	67.22	OCT 06, 2000	LOWEST	68.77	SEP 30, 2001
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## GROUND-WATER LEVELS

## CITY OF CHESAPEAKE

364227076074709. Local number, 61B 15 SOW 091H.

**LOCATION.**--Lat 36°42'28", long 76°07'46", NAD83, Hydrologic Unit 03010205, 300 ft south of Lockheed Avenue, 0.7 mi east of intersection of State Highway 165 and Lockheed Avenue, and 3.8 mi east of Fentress. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Virginia Beach aquifer of Cretaceous age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in. to 700 ft, diameter 2 in. from 674 to 790 ft, depth 790 ft, screened 759 to 769 ft.

**INSTRUMENTATION.**--Occasional measurement with manometer or chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to Jul. 6, 1995, bimonthly measurement with manometer.

**DATUM.**--Elevation of land-surface datum is 15 ft above sea level, from topographic map. Measuring point: Top of casing, 1.1 ft above land-surface datum.

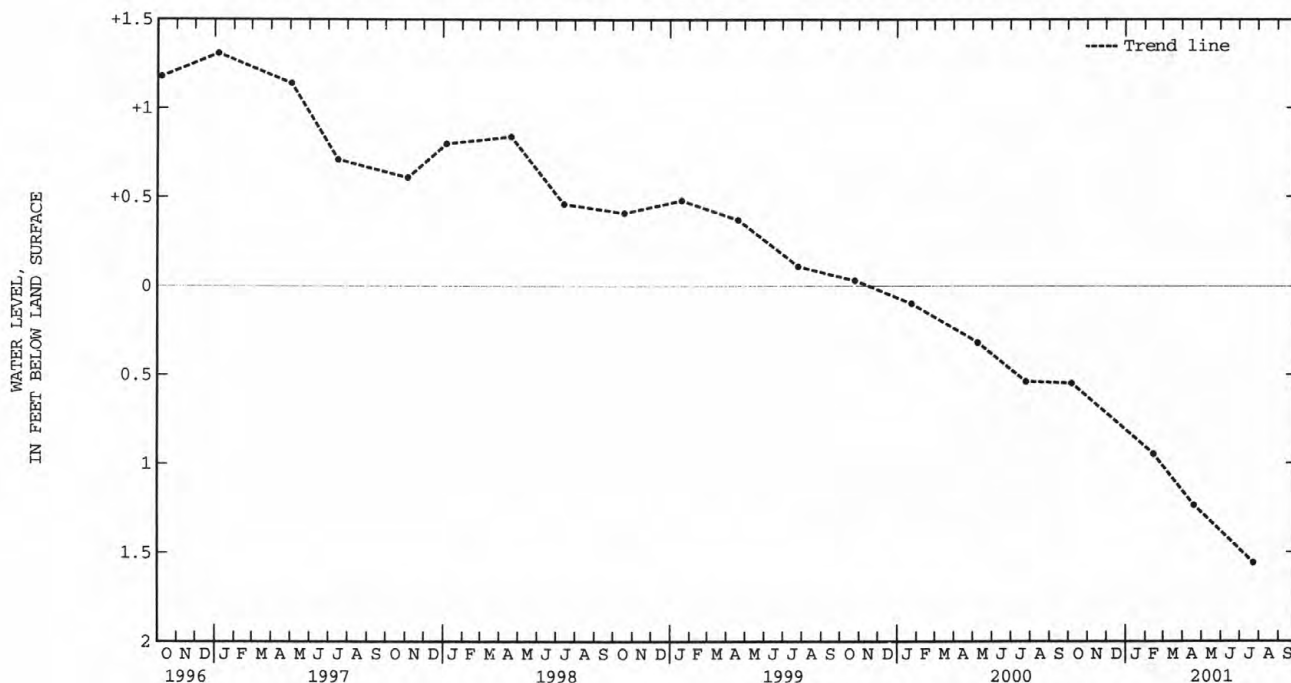
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown. Flowing well prior to July 1997.

**PERIOD OF RECORD.**--March 1989 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 3.75 ft above land-surface datum, Apr. 20, 1989; lowest measured, 1.56 ft below land-surface datum, Jul. 23, 2001.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 06	.55	FEB 14	.95	APR 19	1.24	JUL 23	1.56
WATER YEAR 2001		HIGHEST	.55	OCT 06, 2000	LOWEST	1.56	JUL 23, 2001



## GROUND-WATER LEVELS

99

## CITY OF CHESAPEAKE

364227076074710. Local number, 61B 16 SOW 091J.

**LOCATION.**--Lat 36°42'28", long 76°07'46", NAD83, Hydrologic Unit 03010205, 300 ft south of Lockheed Avenue, 0.7 mi east of intersection of State Highway 165 and Lockheed Avenue, and 3.8 mi east of Fentress. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Chickahominy-Piney Point aquifer of Eocene-Oligocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4.5 in. to 602 ft, diameter 2 in. from 586 to 690 ft, depth 690 ft, screened 670 to 680 ft.

**INSTRUMENTATION.**--Occasional measurement with manometer or chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to Jul. 6, 1995, bimonthly measurement with manometer.

**DATUM.**--Elevation of land-surface datum is 15 ft above sea level, from topographic map. Measuring point: Top of casing, 1.1 ft above land-surface datum.

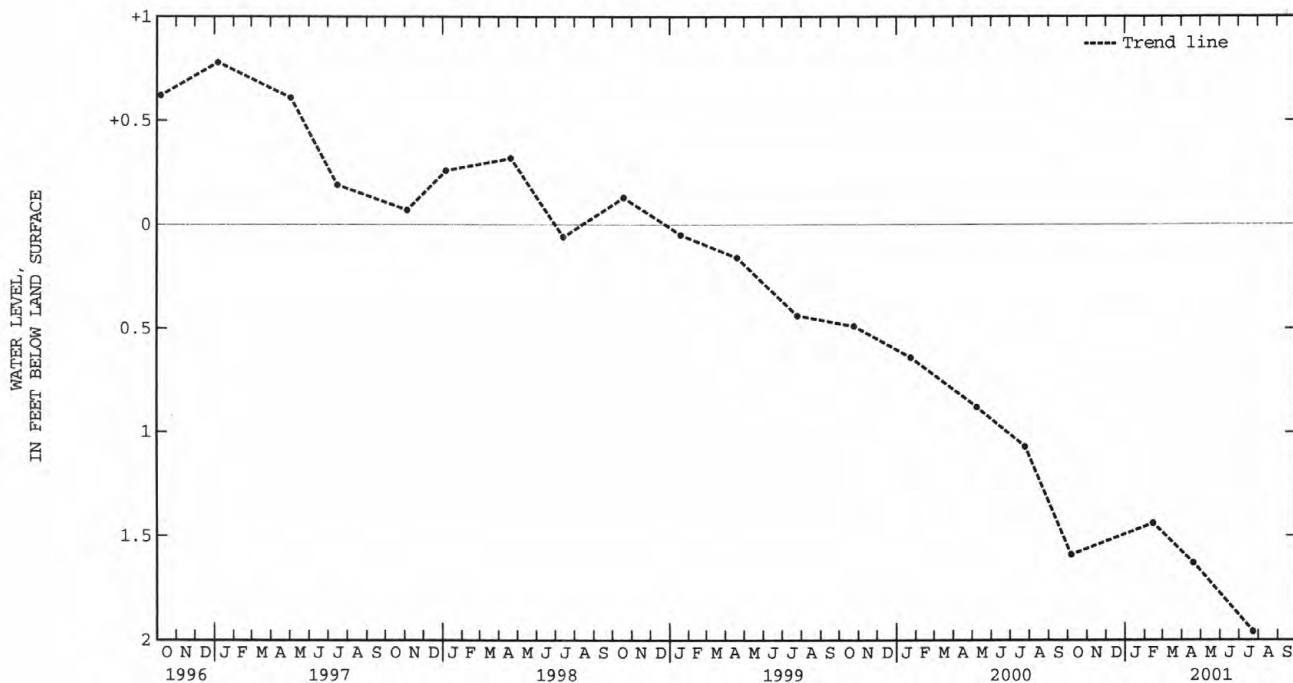
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown. Water from this well is known to contain concentrations of dissolved solids greater than 1,000 mg/L.

**PERIOD OF RECORD.**--March 1989 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 3.31 ft above land-surface datum, Mar. 13, 1989; lowest measured, 1.96 ft below land-surface datum, Jul. 23, 2001.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 06	1.59	FEB 14	1.44	APR 19	1.63	JUL 23	1.96
WATER YEAR 2001		HIGHEST	1.44	FEB 14, 2001	LOWEST	1.96	JUL 23, 2001



## GROUND-WATER LEVELS

## CITY OF CHESAPEAKE

364227076074711. Local number, 61B 17 SOW 091K.

**LOCATION.**--Lat 36°42'28", long 76°07'46", NAD83, Hydrologic Unit 03010205, 300 ft south of Lockheed Avenue, 0.7 mi east of intersection of State Highway 165 and Lockheed Avenue, and 3.8 mi east of Pentress. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Yorktown-Eastover aquifer of Miocene-Pliocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4.5 in. to 78 ft, diameter 2 in. from 78 to 108 ft, depth 108 ft, screened 88 to 98 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to Jul. 6, 1995, bimonthly measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 15 ft above sea level, from topographic map. Measuring point: Top of casing, 1.3 ft above land-surface datum.

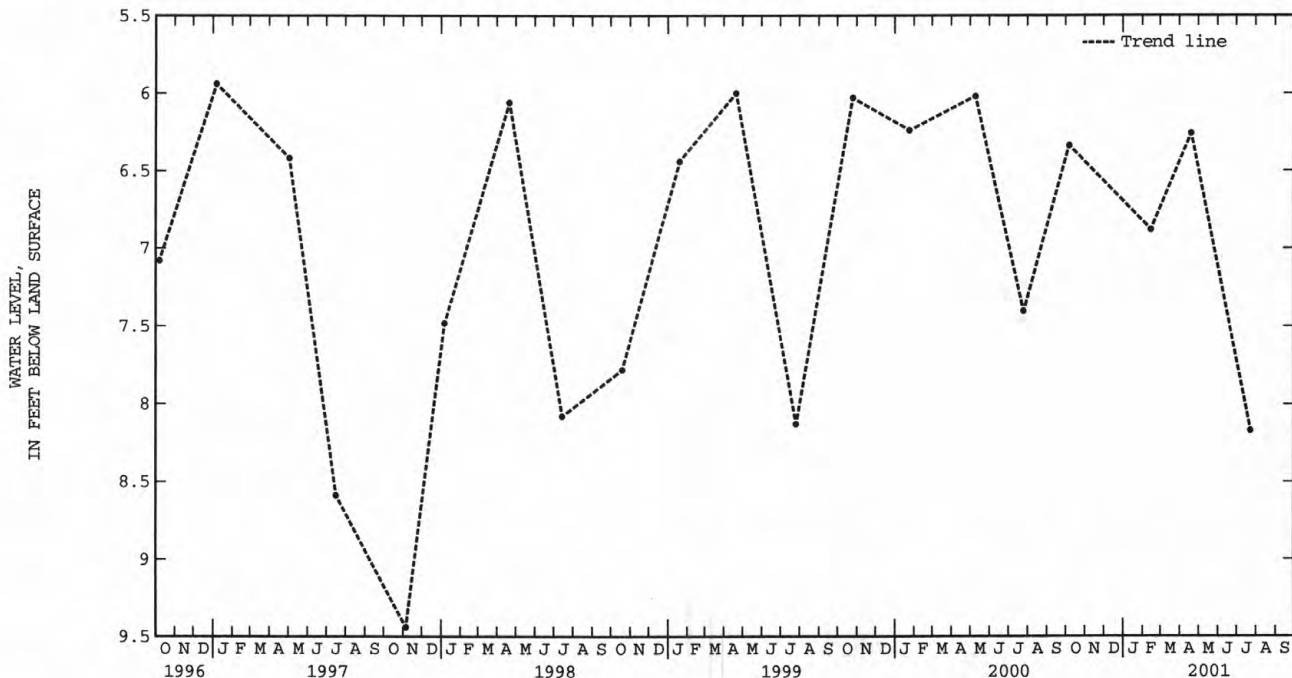
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division.

**PERIOD OF RECORD.**--March 1989 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 5.00 ft below land-surface datum, Jan. 30, 1991; lowest measured, 9.44 ft below land-surface datum, Nov. 5, 1997.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 06	6.34	FEB 14	6.88	APR 19	6.26	JUL 23	8.17
WATER YEAR 2001		HIGHEST	6.26	APR 19, 2001	LOWEST	8.17	JUL 23, 2001





## GROUND-WATER LEVELS

101

## CITY OF CHESAPEAKE

364227076074713. Local number, 61B 19 SOW 091M.

**LOCATION.**--Lat 36°42'28", long 76°07'46", NAD83, Hydrologic Unit 03010205, 300 ft south of Lockheed Avenue, 0.7 mi east of intersection of State Highway 165 and Lockheed Avenue, and 3.8 mi east of Fentress. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Columbia aquifer of Quaternary age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4.5 in., depth 20 ft, screened 10 to 20 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to Jul. 6, 1995, bimonthly measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 15 ft above sea level, from topographic map. Measuring point: Top of casing, 1.1 ft above land-surface datum.

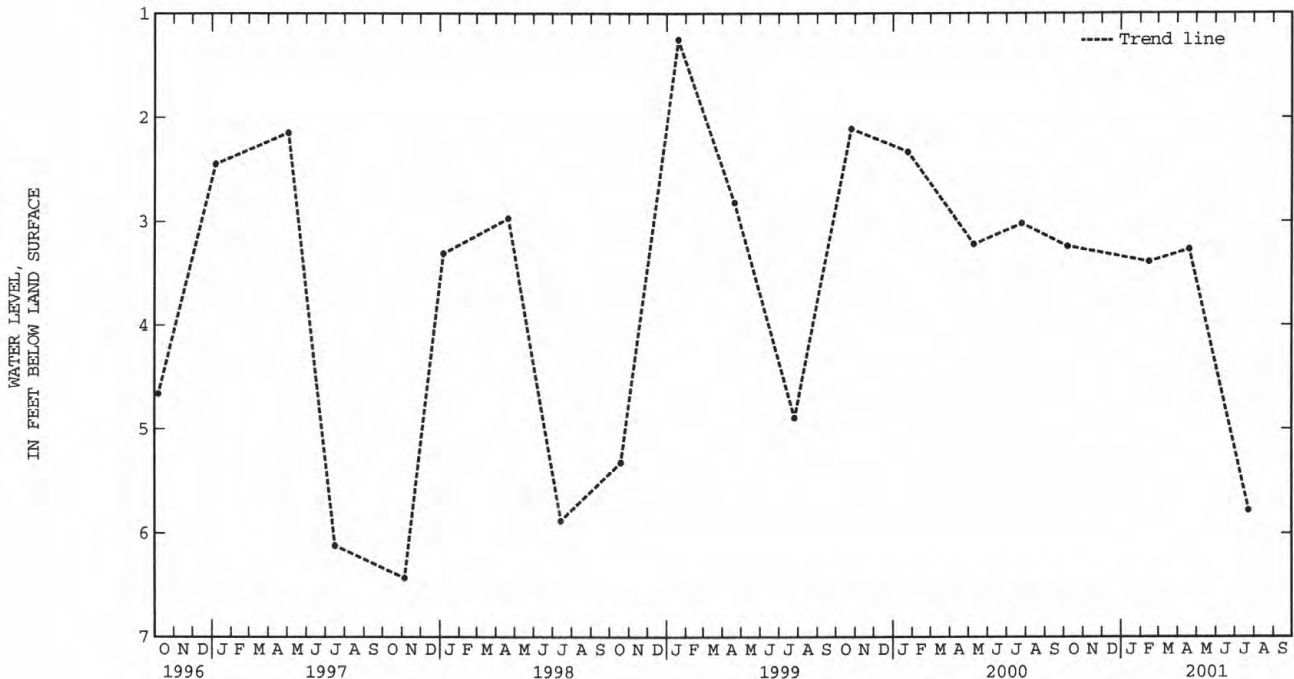
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division.

**PERIOD OF RECORD.**--March 1989 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 1.09 ft below land-surface datum, Feb. 26, 1992; lowest measured, 6.74 ft below land-surface datum, Nov. 1, 1994.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 06	3.24	FEB 14	3.39	APR 19	3.27	JUL 23	5.78
WATER YEAR 2001		HIGHEST	3.24	OCT 06, 2000		LOWEST	5.78 JUL 23, 2001



## GROUND-WATER LEVELS

## CHESTERFIELD COUNTY

372519077264701. Local number, 51H 92.

**LOCATION.**--Lat 37°25'20", long 77°26'46", NAD83, Hydrologic Unit 02080206, 500 ft north of Alcott Road at Bensley, 0.3 mi southwest of the intersection of U.S. Highways 1 and 301 (Jefferson Davis Highway) and Alcott Road. Owner: U.S. Geological Survey.

**AQUIFER.**--Middle Potomac aquifer of Cretaceous age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 3 in., depth 53 ft, screened 51 to 53 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by USGS personnel. Oct. 1, 1985, to Jan. 23, 1991, digital recorder 60-minute punch. Prior to Oct. 1, 1985, monthly measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 103.00 ft above sea level. Measuring point: Top of casing, 1.5 ft above land-surface datum prior to Jun. 12, 2001; top of casing, 0.17 ft below land-surface datum thereafter.

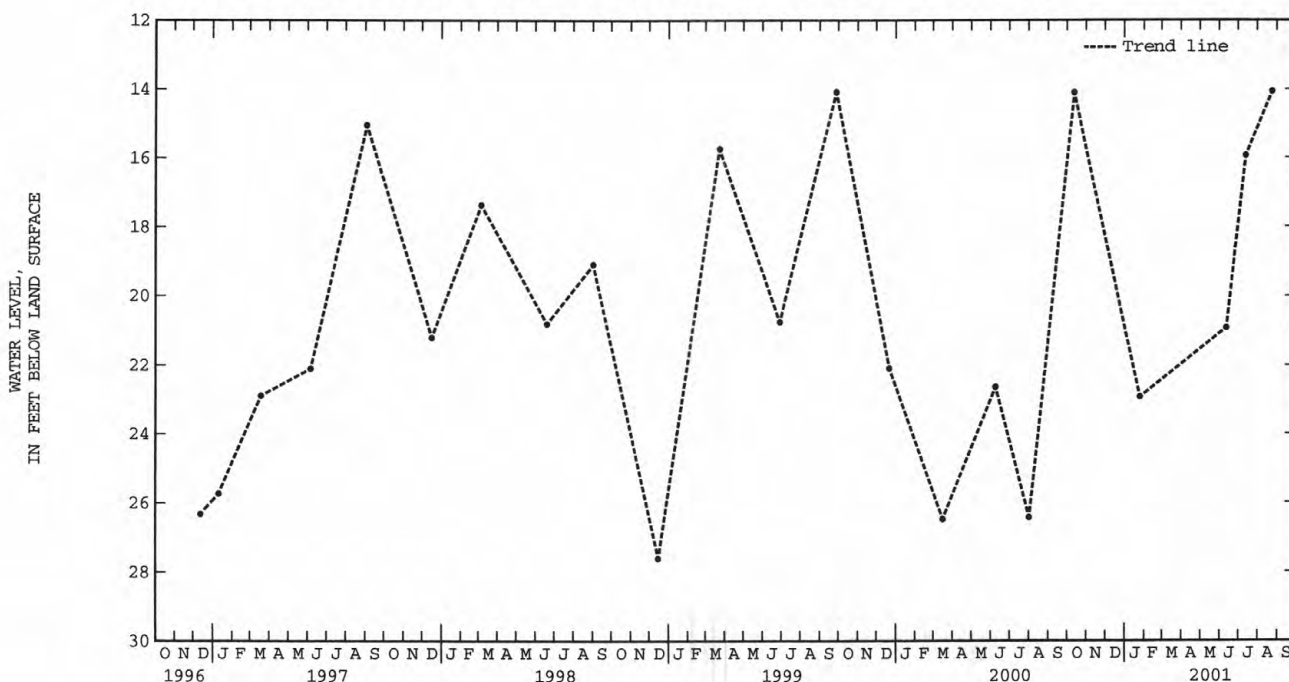
**REMARKS.**--Water level after Sep. 20, 1996 affected by local pumpage.

**PERIOD OF RECORD.**--April 1985 to current year. Unpublished records available prior to October 1987 in files of the Geological Survey.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level recorded, 8.95 ft below land-surface datum, Jun. 14, 1989; lowest measured, 27.60 ft below land-surface datum, Dec. 15, 1998, result of local pumpage.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 12	14.10	JAN 25	22.93	JUN 12	20.91	JUL 13	15.94	AUG 24	14.07
WATER YEAR 2001		HIGHEST	14.07	AUG 24, 2001	LOWEST	22.93	JAN 25, 2001		



## GROUND-WATER LEVELS

103

## CHESTERFIELD COUNTY

372519077264704. Local number, 51H 95.

**LOCATION.**--Lat 37°25'20", long 77°26'46", NAD83, Hydrologic Unit 02080206, 500 ft north of Alcott Road at Bensley and 0.3 mi southwest of the intersection of U.S. Highways 1 and 301 (Jefferson Davis Highway) and Alcott Road. Owner: U.S. Geological Survey.

**AQUIFER.**--Columbia aquifer of Quaternary age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 3 in., depth 4.7 ft, screened 2.7 to 4.7 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by USGS personnel. Prior to Jan. 23, 1991, digital recorder 60-minute punch and monthly measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 102.88 ft above sea level. Measuring point: Top of casing, 1.9 ft above land-surface datum prior to Jun. 12, 2001; top of casing, 0.14 ft below land-surface datum thereafter.

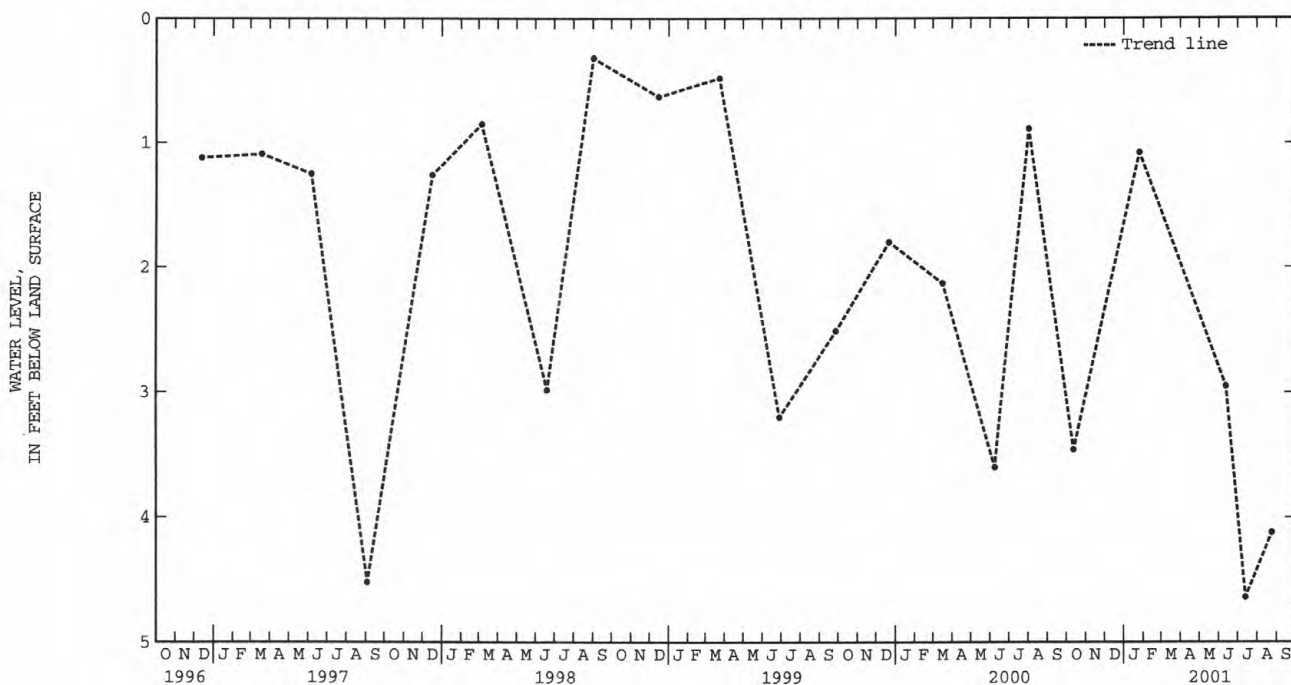
**REMARKS.**--Upper limit of recorded water-level data is limited by well construction. Water level affected by pumping and sampling at different times during the year.

**PERIOD OF RECORD.**--April 1985 to current year. Unpublished records available prior to October 1987 in files of the Geological Survey.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level recorded, 0.02 ft below land-surface datum, Jan. 11, 12, 1990; lowest measured, 4.64 ft below land-surface datum, Jul. 13, 2001.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 12	3.46	JAN 25	1.08	JUN 12	2.95	JUL 13	4.64	AUG 24	4.12
WATER YEAR 2001		HIGHEST		1.08	JAN 25, 2001		LOWEST		4.64
									JUL 13, 2001



## GROUND-WATER LEVELS

## CHESTERFIELD COUNTY

372519077264605. Local number, 51H130.

**LOCATION.**--Lat 37°25'20", long 77°26'45", NAD83, Hydrologic Unit 02080206, 500 ft north of Alcott Road at Bensley and 0.3 mi southwest of the intersection of U.S. Highway 1 and 301 (Jefferson Davis Highway) and Alcott Road. Owner: U.S. Geological Survey.

**AQUIFER.**--Petersburg Granite of Mississippian age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 6 in., depth 96 ft, cased to 71 ft, open hole 71 to 96 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by USGS personnel. Prior to Oct. 1, 1995, monthly measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 102.70 ft above sea level. Measuring point: Top of casing, 1.64 ft above land-surface datum prior to Jun. 12, 2001; top of casing, 0.34 ft below land-surface datum thereafter.

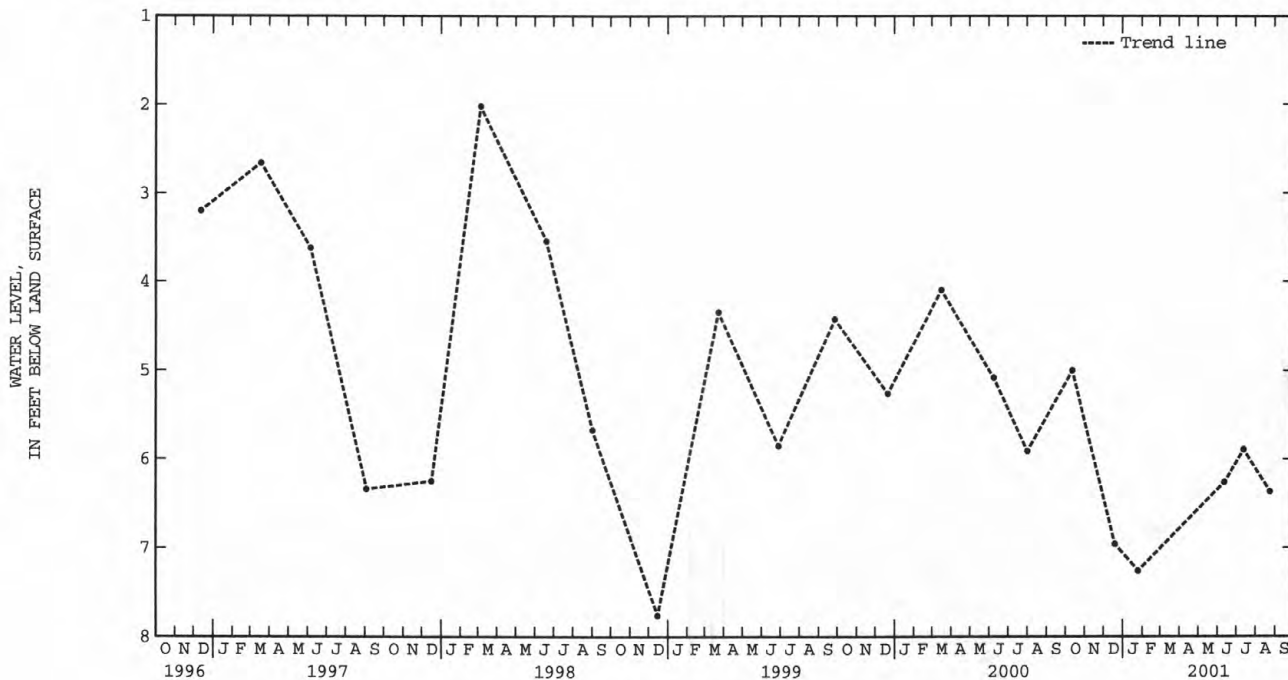
**REMARKS.**--Water level affected by pumping and sampling at different times during the year.

**PERIOD OF RECORD.**--May 1985 to current year. Unpublished records available prior to October 1988 in files of the Geological Survey.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 1.64 ft above land-surface datum, June 1, 1989; lowest measured, 7.76 ft below land-surface datum, Dec. 15, 1998.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 12	5.00	DEC 19	6.96	JAN 25	7.26	JUN 12	6.26	JUL 13	5.89	AUG 24	6.37
WATER YEAR 2001		HIGHEST	5.00	OCT 12, 2000	LOWEST	7.26	JAN 25, 2001				



CHESTERFIELD COUNTY

**LOCATION.**--Lat 37°20'32", long 77°19'59", NAD83, Hydrologic Unit 02080206, at Virginia Department of Transportation salt storage facility, 200 ft east of intersection of State Highway 10 and Interstate 295. Owner: U.S. Geological Survey.

**AQUIFER.**--Yorktown-Eastover aquifer of Miocene-Pliocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 3 in., depth 16.77 ft, screened 11.77 ft to 16.77 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Unpublished digital recorder data Nov. 13, 1995, to Apr. 2, 1996.

**DATUM.**--Elevation of land-surface datum is 70 ft above sea level, from topographic map. Measuring point: Top of casing, 2.59 ft above land-surface datum.

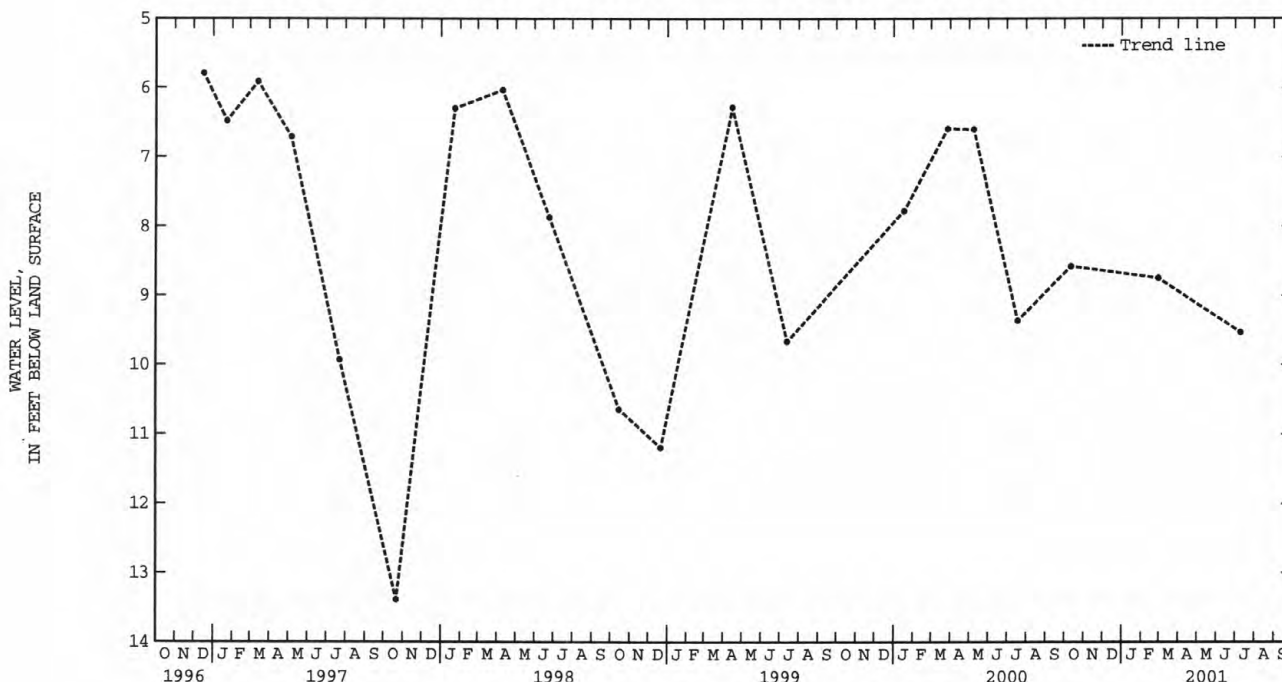
**REMARKS.**--Records provided by Virginia Department of Environmental Quality - Water Division. Well drilled as part of Fall Zone ground-water study.

**PERIOD OF RECORD.**--August 1995 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 5.79 ft below land-surface datum, Dec. 16, 1996; lowest measured, 13.39 ft below land-surface datum, Oct. 21, 1997.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM. WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL		
OCT 11	8.58	FEB 28	8.75	JUL 10	9.53		
WATER YEAR 2001		HIGHEST	8.58	OCT 11, 2000	LOWEST	9.53	JUL 10, 2001





## GROUND-WATER LEVELS

## CHESTERFIELD COUNTY

372031077200003. Local number, 52G 24.

**LOCATION.**--Lat 37°20'32", long 77°19'59", NAD83, Hydrologic Unit 02080206, at Virginia Department of Transportation salt storage facility, 200 ft east of intersection of State Highway 10 and Interstate 295. Owner: U.S. Geological Survey.

**AQUIFER.**--Middle Potomac aquifer of Cretaceous age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 2 in., depth 64.79 ft, screened 59.79 ft to 64.79 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Unpublished digital recorder data Mar. 5, 1996, to Apr. 2, 1996.

**DATUM.**--Elevation of land-surface datum is 70 ft above sea level, from topographic map. Measuring point: Top of casing, 2.35 ft above land-surface datum.

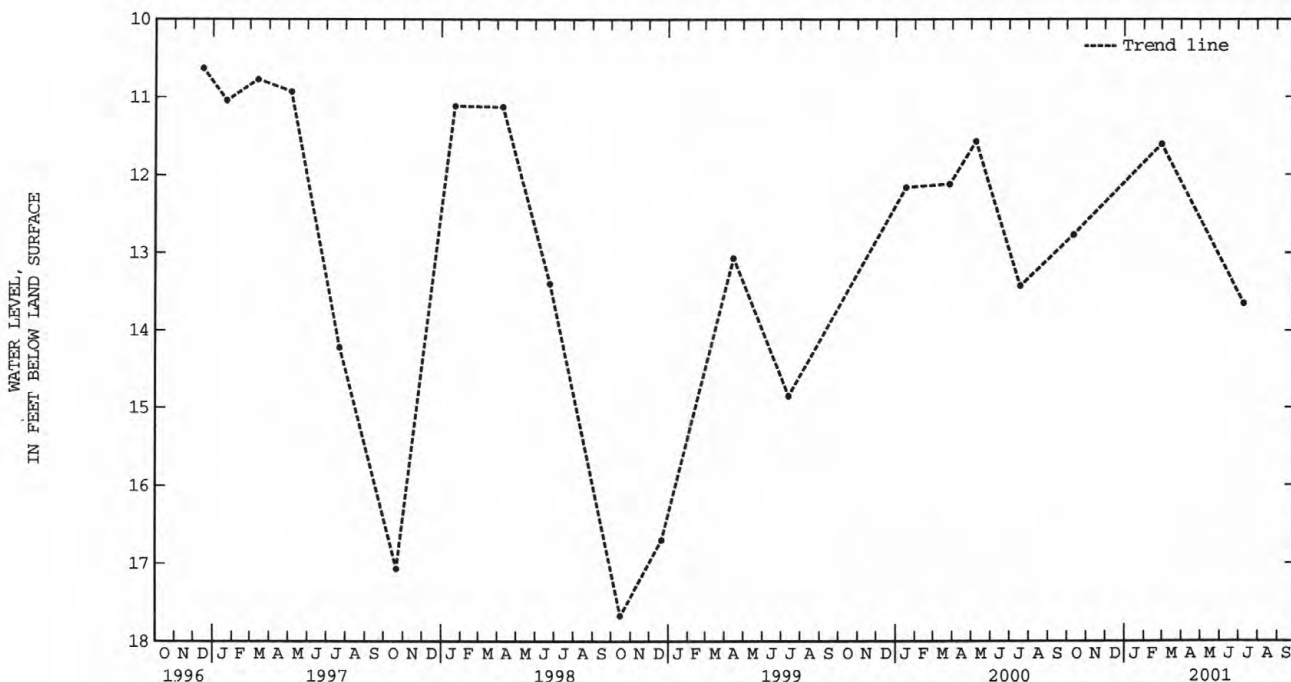
**REMARKS.**--Records provided by Virginia Department of Environmental Quality - Water Division. Well drilled as part of Fall Zone ground-water study.

**PERIOD OF RECORD.**--August 1995 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 10.47 ft below land-surface datum, Apr. 2, 1996; lowest measured, 17.67 ft below land-surface datum, Oct. 15, 1998.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 11	12.77	FEB 28	11.61	JUL 10	13.65
WATER YEAR 2001		HIGHEST	11.61	FEB 28, 2001	LOWEST
					13.65
				JUL 10, 2001	



## 107

390348078035501. Local number, 46W175.

**LOCATION.**--Lat 39°03'48", long 78°03'54", NAD83, Hydrologic Unit 02070007, 1.5 mi east of the intersection of U.S. Highways 17/50 and 340 at Blandy Experimental Farm. Owner: University of Virginia.

**AQUIFER.**--Conococheague Limestone of Middle Cambrian age.

**WELL CHARACTERISTICS.**--Drilled unused water well, diameter 6 in., depth 80.4 ft, cased to 24 ft, open hole 24 to 80.4 ft.

**INSTRUMENTATION.**--Electronic data logger 60-minute record interval. Prior to February 28, 2000, digital recorder 60-minute punch.

**DATUM.**--Elevation of land-surface datum is 600 ft above sea level, from topographic map. Measuring point: Top of casing, 3.7 ft above land-surface datum.

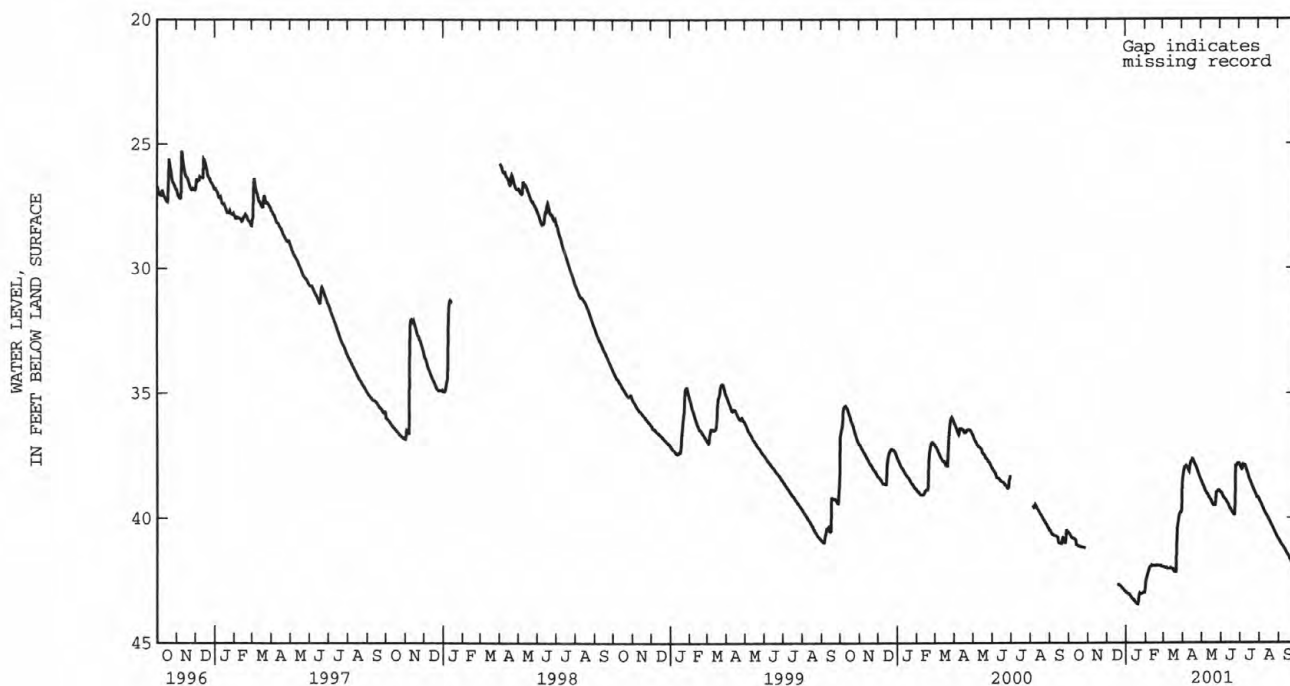
REMARKS.--Missing record due to recorder malfunction.

**PERIOD OF RECORD.**--July 1987 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level recorded, 24.63 ft below land-surface datum, Apr. 1, 1998, may have gone higher during period of missing record, Jan. 16 to Apr. 1, 1998; lowest recorded, 44.51 ft below land-surface datum, Feb. 11, 13-16, 1992.

**EXTREMES FOR CURRENT YEAR.**--Highest instantaneous water level, 37.62 ft below land-surface datum, Apr. 16; lowest instantaneous water level, 43.45 ft below land-surface datum, Jan. 19.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	40.78	---	---	43.04	42.12	41.99	37.95	38.79	39.19	38.03	39.53	41.06
10	40.83	---	---	43.22	41.88	42.01	38.08	39.04	39.36	37.95	39.81	41.24
15	41.10	---	---	43.36	41.91	42.02	37.71	39.25	39.62	38.37	40.04	41.47
20	41.15	---	42.69	43.36	41.88	42.16	37.85	39.50	39.83	38.69	40.27	41.70
25	41.18	---	42.80	43.03	41.90	40.02	38.16	38.97	37.91	38.99	40.54	41.85
END	---	---	42.97	42.72	41.95	38.55	38.50	38.98	37.83	39.23	40.83	42.07



**GROUND-WATER LEVELS**  
**CITY OF COLONIAL HEIGHTS**

371644077244601. Local number, 51G 1.

**LOCATION.**--Lat 37°16'45", long 77°24'45", NAD83, Hydrologic Unit 02080207, 200 ft west of U.S. Highways 1 and 301, 0.5 mi south of the intersection of State Highway 144 (Ashby Avenue) and U.S. Highways 1 and 301 (Boulevard) in Colonial Heights. Owner: Dean Whittington.

**AQUIFER.**--Petersburg Granite of Mississippian age.

**WELL CHARACTERISTICS.**--Drilled unused water well, diameter 6 in., depth 100 ft, cased to 50 ft, open hole 50 to 100 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by USGS personnel.

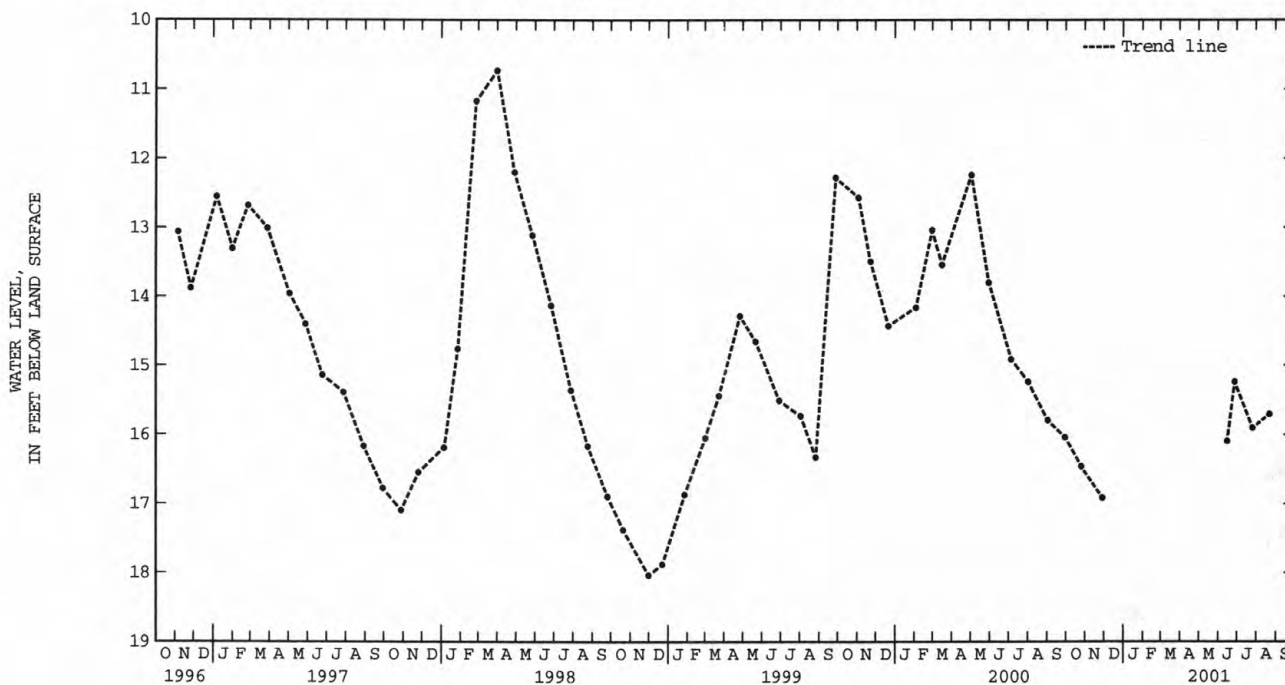
**DATUM.**--Elevation of land-surface datum is 57.30 ft above sea level. Measuring point: Top of casing, 1.0 ft above land-surface datum.

**PERIOD OF RECORD.**--October 1939 to November 2000, June 2001 to September 2001.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 10.73 ft below land-surface datum, Jan. 26, 1978, Mar. 31, 1998; lowest measured, 19.26 ft below land-surface datum, Dec. 3, 1963.

**WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001**

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25	16.46	NOV 28	16.92	JUN 15	16.09	JUN 27	15.24	JUL 26	15.90	AUG 22	15.70
WATER YEAR 2001		HIGHEST	15.24	JUN 27, 2001	LOWEST	16.92	NOV 28, 2000				



## GROUND-WATER LEVELS

109

## ESSEX COUNTY

380024076585801. Local number, 55N 2.

**LOCATION.**--Lat 38°00'24", long 76°58'57", NAD83, Hydrologic unit 02080104, 250 feet north east of U.S. Highway 17, 1.6 mi north west of State Highway 624, 1.2 mi southeast of Champlain on the north bound side of U.S. Highway 17. Owner: Ray Ellis.

**AQUIFER.**--Middle Potomac aquifer of Cretaceous age.

**WELL CHARACTERISTICS.**--Drilled unused water well, diameter 4 in., depth 516 ft, casing 0 to 494, 514 to 516, screened 494 to 514.

**INSTRUMENTATION.**--Occasional measurement with chalk tape by USGS personal.

**DATUM.**--Elevation of land surface datum is 141 ft above sea level, from topographic map. Measuring point: Top of sanitary seal, 1.96 ft above land surface datum.

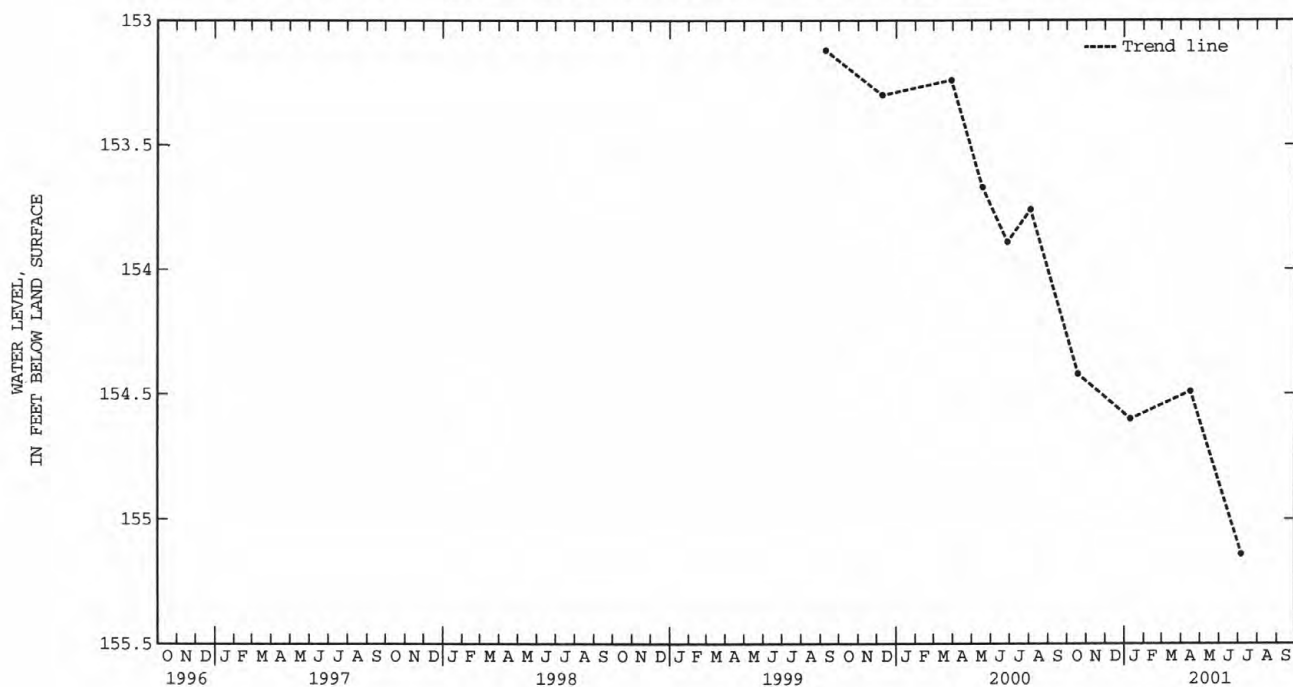
**REMARKS.**--Water level affected by regional drawdown.

**PERIOD OF RECORD.**--September 1999 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 153.12 ft below land-surface datum, Sep. 9, 1999; lowest measured, 155.14 ft below land-surface datum Jul. 6, 2001.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 18	154.42	JAN 10	154.60	APR 16	154.49	JUL 06	155.14
WATER YEAR 2001		HIGHEST	154.42	OCT 18, 2000	LOWEST	155.14	JUL 06, 2001



## GROUND-WATER LEVELS

## FAIRFAX COUNTY

385638077220101. Local number, 52V 2.

**LOCATION.**--Lat 38°56'58", long 77°22'00", NAD83, Hydrologic Unit 02070008, at U.S. Geological Survey National Center in Reston. Owner: U.S. Geological Survey.

**AQUIFER.**--Manassas Sandstone of Triassic age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 8 in., depth 205 ft, cased to 35 ft, open hole 35 to 205 ft.

**INSTRUMENTATION.**--Satellite data collection platform 15-minute record interval. Sept. 1, 1996 to to Sept. 13, 1999, electronic data logger 15-minute record interval. Prior to Sept. 1, 1996, continuous strip-chart recorder.

**DATUM.**--Elevation of land-surface datum is 390 ft above sea level, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum.

**REMARKS.**--Missing record due to recorder malfunction.

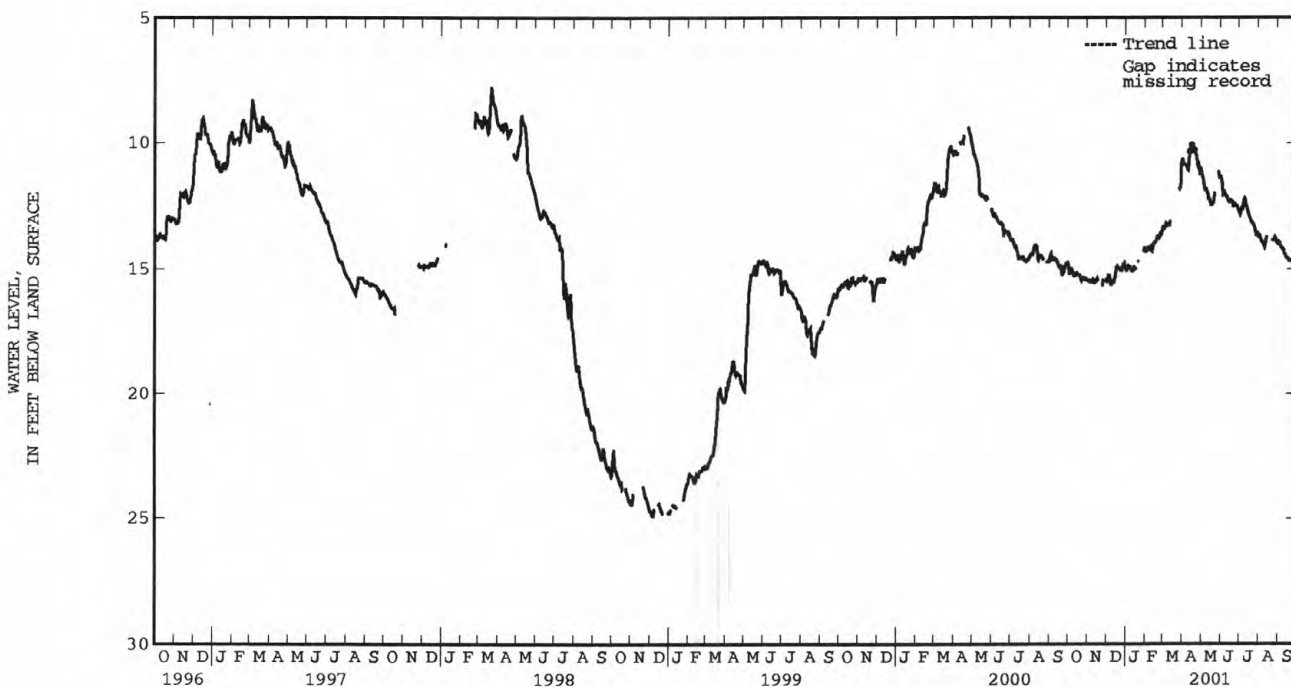
**PERIOD OF RECORD.**--October 1976 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level recorded, 6.47 ft below land-surface datum, Mar. 30, 1984; lowest recorded, 24.92 ft below land-surface datum, Dec. 7-8, 1998.

**EXTREMES FOR CURRENT YEAR.**--Highest water level measured, 10.09 ft below land-surface datum, Apr. 16; lowest instantaneous water level, 15.68 ft below land-surface datum, Nov. 23.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	15.07	15.48	15.31	14.91	14.20	13.31	10.88	11.51	12.13	12.58	13.83	14.12
10	15.28	15.46	15.65	15.07	14.14	13.21	11.06	11.95	12.12	12.20	14.09	14.29
15	15.19	15.48	15.37	14.95	13.99	---	---	12.22	12.33	12.71	13.74	14.58
20	15.34	---	14.99	14.73	13.69	---	10.30	12.41	12.33	13.10	---	14.70
25	15.37	15.67	15.09	---	13.73	---	10.79	---	12.42	13.31	13.85	14.61
EOM	15.45	15.43	14.95	14.15	13.61	10.86	11.13	11.37	12.64	13.63	13.90	14.64





## GROUND-WATER LEVELS

111

## CITY OF FRANKLIN

364033076562604. Local number, 55B 67 SOW 145D.

**LOCATION.**--Lat 36°40'34", long 76°56'25", NAD83, Hydrologic Unit 03010202, at P. D. Camp Community College in Franklin. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Aquia aquifer of Paleocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 140 ft, screened 130 to 140 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by USGS personnel.

**DATUM.**--Elevation of land-surface datum is 34 ft above sea level, from topographic map. Measuring point: Top of casing, 1.15 ft above land-surface datum.

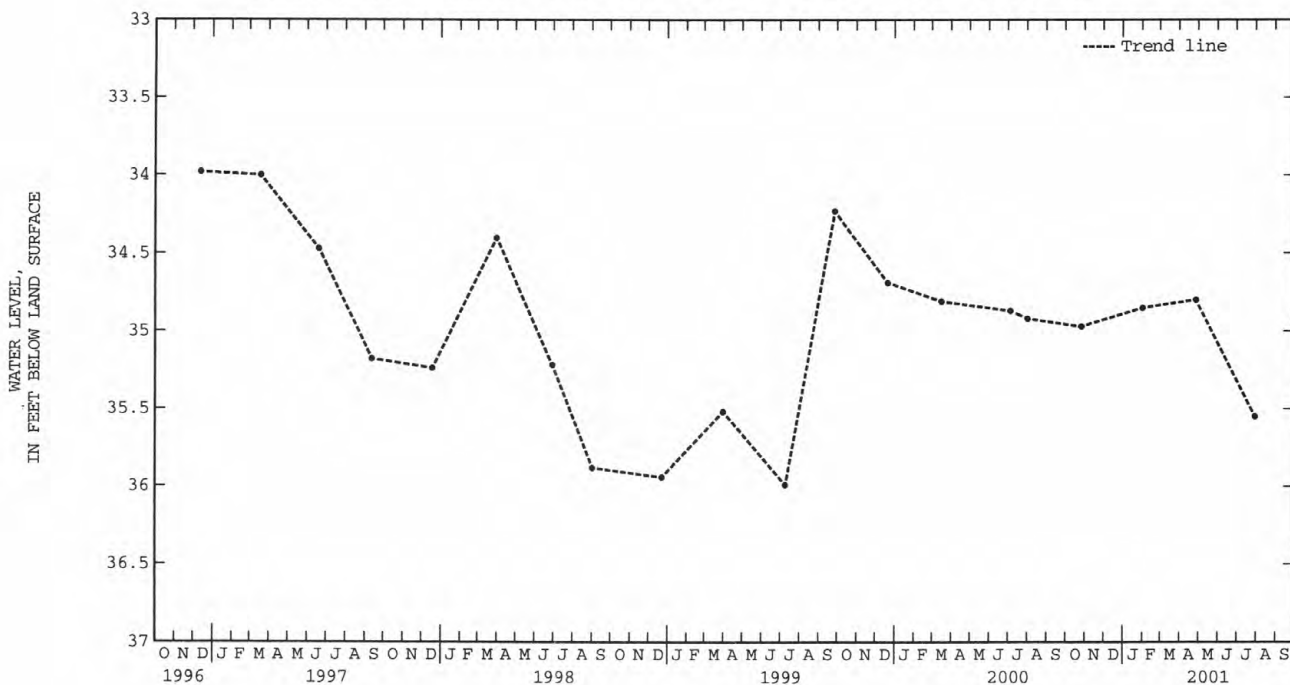
**REMARKS.**--Water level affected by regional drawdown.

**PERIOD OF RECORD.**--November 1984 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 29.51 ft below land-surface datum, Mar. 19, 1985; lowest measured, 35.99 ft below land-surface datum, Jul. 9, 1999.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	34.97	FEB 01	34.85	APR 27	34.80	JUL 30	35.55
WATER YEAR 2001		HIGHEST	34.80	APR 27, 2001	LOWEST	35.55	JUL 30, 2001



## GROUND-WATER LEVELS

## GLOUCESTER COUNTY

372621076404201. Local number, 57H 20 SOW 192A.

**LOCATION.**--Lat 37°26'22", long 76°40'41", NAD83, Hydrologic Unit 02080107, 80 ft north of State Highway 684 (Starvation Road), 1.1 mi northeast of intersection of State Highways 617 and 684. Owner: St. Laurent Paper Products Corporation (formerly Chesapeake Corporation).

**AQUIFER.**--Middle Potomac aquifer of Cretaceous age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in. 200 ft, diameter 2 in. 200 to 910 ft, depth 910 ft, screened 900 to 910 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel.

**DATUM.**--Elevation of land-surface datum is 6 ft above sea level, from topographic map. Measuring point: Top of inner casing, 1.5 ft above land-surface datum.

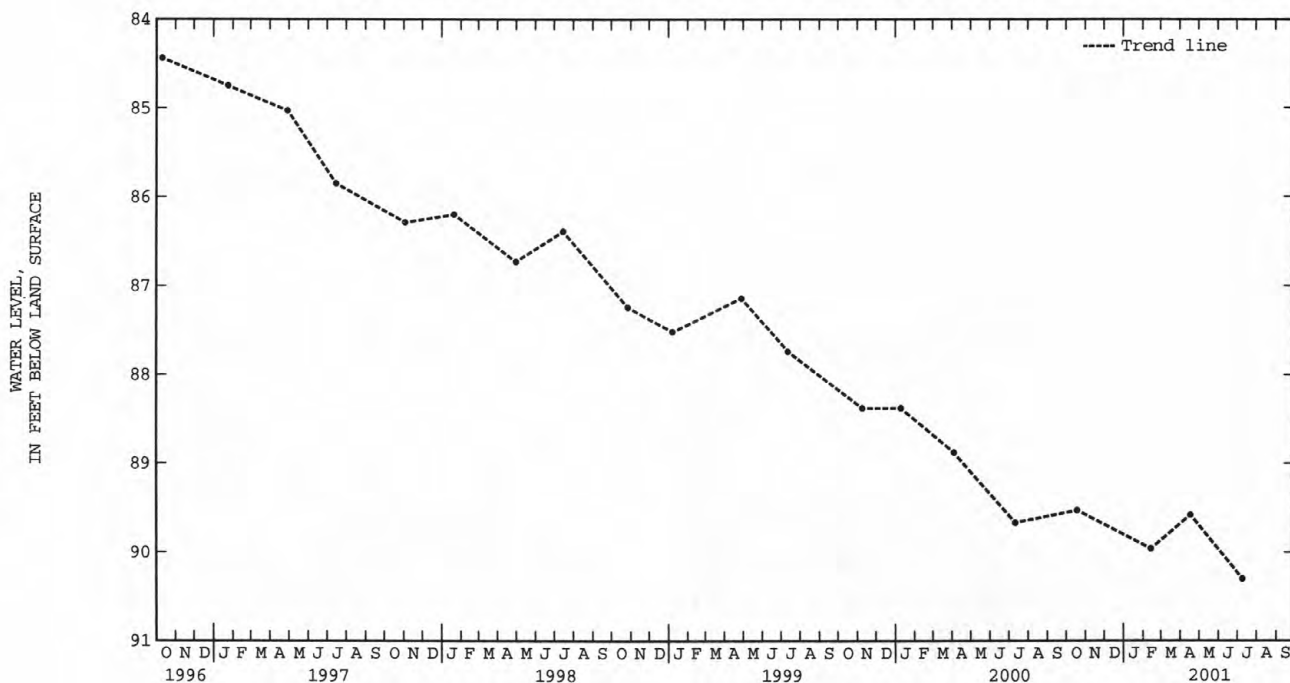
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

**PERIOD OF RECORD.**--June 1994 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 80.59 ft below land-surface datum, Jun. 24, 1994; lowest measured, 90.30 ft below land-surface datum, Jul. 9, 2001.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 18	89.53	FEB 13	89.96	APR 17	89.58	JUL 09	90.30
WATER YEAR 2001		HIGHEST	89.53	OCT 18, 2000	LOWEST	90.30	JUL 09, 2001



## GROUND-WATER LEVELS

113

## GLOUCESTER COUNTY

372621076404202. Local number, 57H 21 SOW 192B.

**LOCATION.**--Lat 37°26'22", long 76°40'41", NAD83, Hydrologic Unit 02080107, 80 ft north of State Highway 684 (Starvation Road), 1.1 mi northeast of intersection of State Highways 617 and 684. Owner: St. Laurent Paper Products Corporation (formerly Chesapeake Corporation).

**AQUIFER.**--Upper Potomac aquifer of Cretaceous age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in. 200 ft, diameter 2 in. 200 to 480 ft, depth 480 ft, screened 470 to 480 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel.

**DATUM.**--Elevation of land-surface datum is 6 ft above sea level, from topographic map. Measuring point: Top of inner casing, 1.6 ft above land-surface datum.

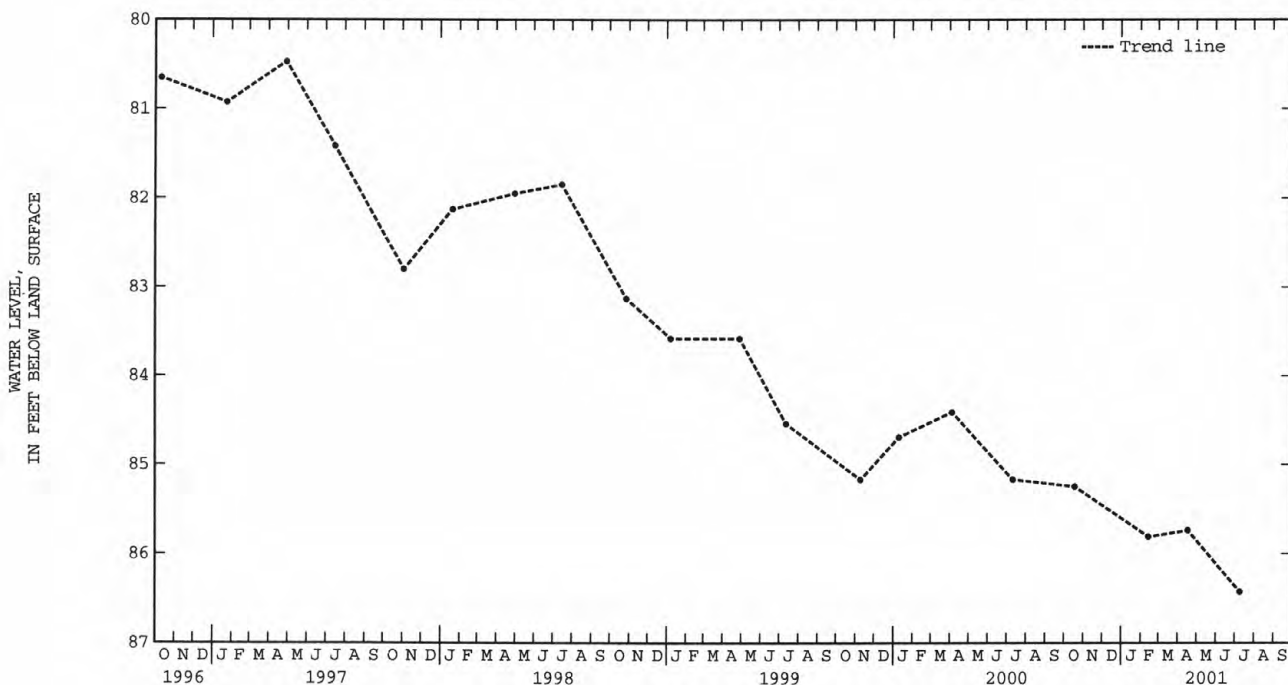
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

**PERIOD OF RECORD.**--June 1994 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 77.63 ft below land-surface datum, Jun. 24, 1994; lowest measured, 86.43 ft below land-surface datum, Nov. 9, 1999, Jul. 9, 2001.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 18	85.25	FEB 13	85.81	APR 17	85.74	JUL 09	86.43
WATER YEAR 2001		HIGHEST	85.25	OCT 18, 2000	LOWEST	86.43	JUL 09, 2001



## GROUND-WATER LEVELS

## GLOUCESTER COUNTY

372621076404203. Local number, 57H 22 SOW 192C.

**LOCATION.**--Lat 37°26'22", long 76°40'41", NAD83, Hydrologic Unit 02080107, 80 ft north of State Highway 684 (Starvation Road), 1.1 mi northeast of intersection of State Highways 617 and 684. Owner: St. Laurent Paper Products Corporation (formerly Chesapeake Corporation).

**AQUIFER.**--Aquia aquifer of Pleocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in. 200 ft, diameter 2 in. 200 to 370 ft, depth 370 ft, screened 350 to 370 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel.

**DATUM.**--Elevation of land-surface datum is 6 ft above sea level, from topographic map. Measuring point: Top of inner casing, 1.7 ft above land-surface datum.

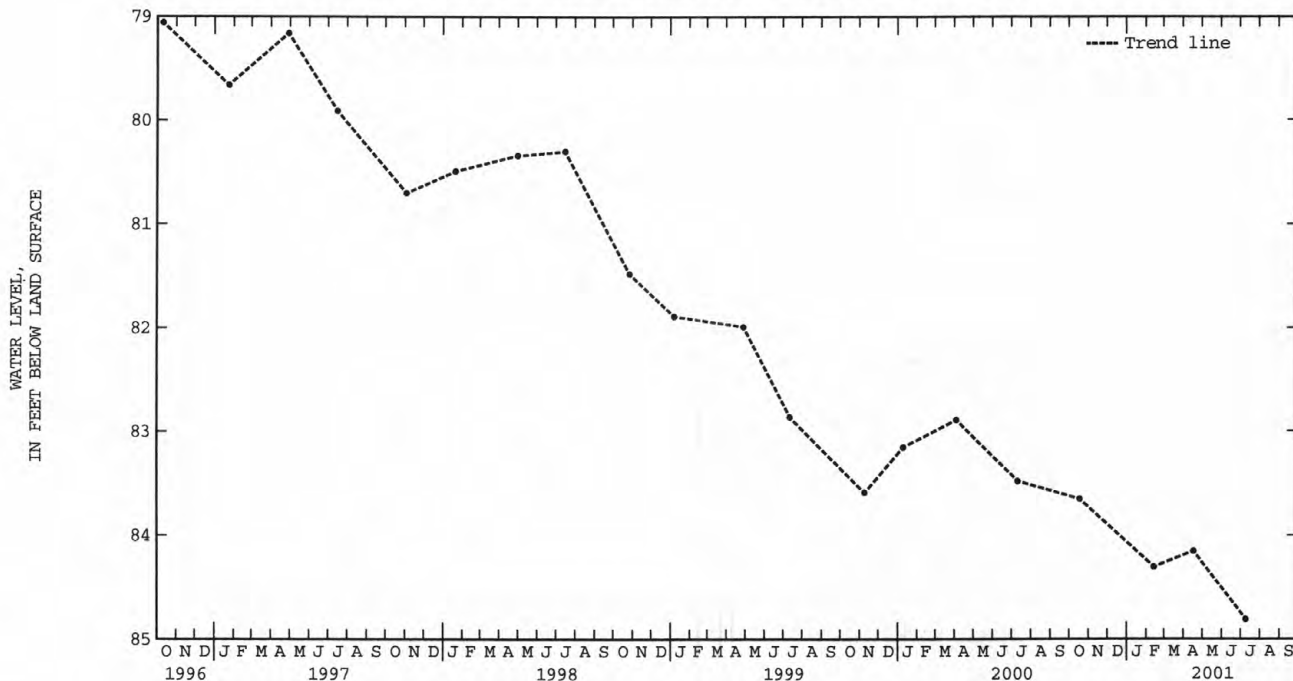
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

**PERIOD OF RECORD.**--June 1994 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 75.78 ft below land-surface datum, Jun. 24, 1994; lowest measured, 84.81 ft below land-surface datum, Jul. 9, 2001.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 18	83.65	FEB 13	84.30	APR 17	84.15	JUL 09	84.81
WATER YEAR 2001		HIGHEST	83.65	OCT 18, 2000	LOWEST	84.81	JUL 09, 2001



## GROUND-WATER LEVELS

115

## GLOUCESTER COUNTY

372331076312602. Local number, 58H 6 SOW 168A.

**LOCATION.**--Lat 37°23'32", long 76°31'25", NAD83, Hydrologic Unit 02080102, at entrance to Gloucester County landfill, 0.3 mi east of U.S. Highway 17, and 1.4 mi south of Gloucester. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Lower Potomac aquifer of Cretaceous age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 1,300 ft, screened 1,290 to 1,300 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Jun. 11, 1985, to Jul. 7, 1995, bimonthly measurement with chalked tape. Prior to Jun. 11, 1985, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 75 ft above sea level, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum.

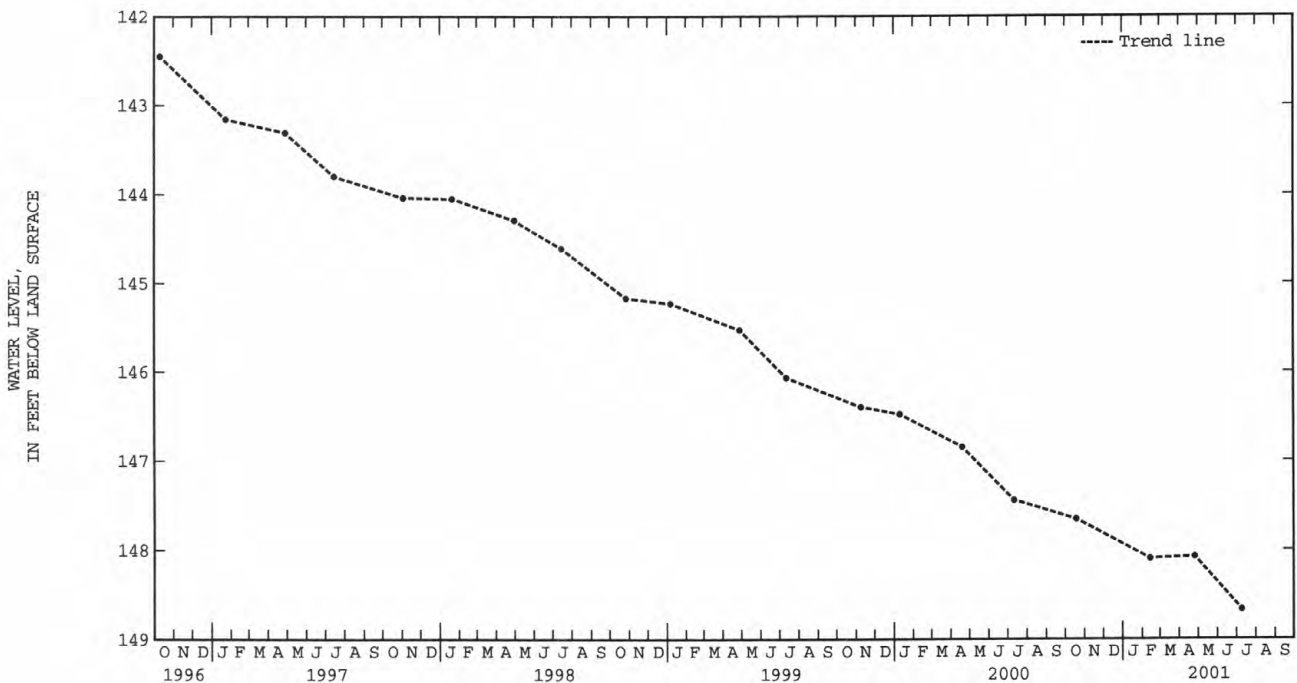
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown. Water from this well is known to contain concentrations of dissolved solids greater than 1,000 mg/L.

**PERIOD OF RECORD.**--August 1982 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 125.26 ft below land-surface datum, Feb. 14, 1983; lowest measured, 148.67 ft below land-surface datum, Jul. 9, 2001.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 18	147.66	FEB 13	148.10	APR 25	148.08	JUL 09	148.67
WATER YEAR 2001		HIGHEST	147.66	OCT 18, 2000	LOWEST	148.67	JUL 09, 2001



## GROUND-WATER LEVELS

## GLOUCESTER COUNTY

372331076312603. Local number, 58H 7 SOW 168B.

**LOCATION.**--Lat 37°23'32", long 76°31'25", NAD83, Hydrologic Unit 02080102, at entrance to Gloucester County landfill, 0.3 mi east of U.S. Highway 17, and 1.4 mi south of Gloucester. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Middle Potomac aquifer of Cretaceous age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in. to 186 ft, diameter 2 in. from 186 to 960 ft, depth 960 ft, screened 950 to 960 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to Jul. 7, 1995, bimonthly measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 75 ft above sea level, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum.

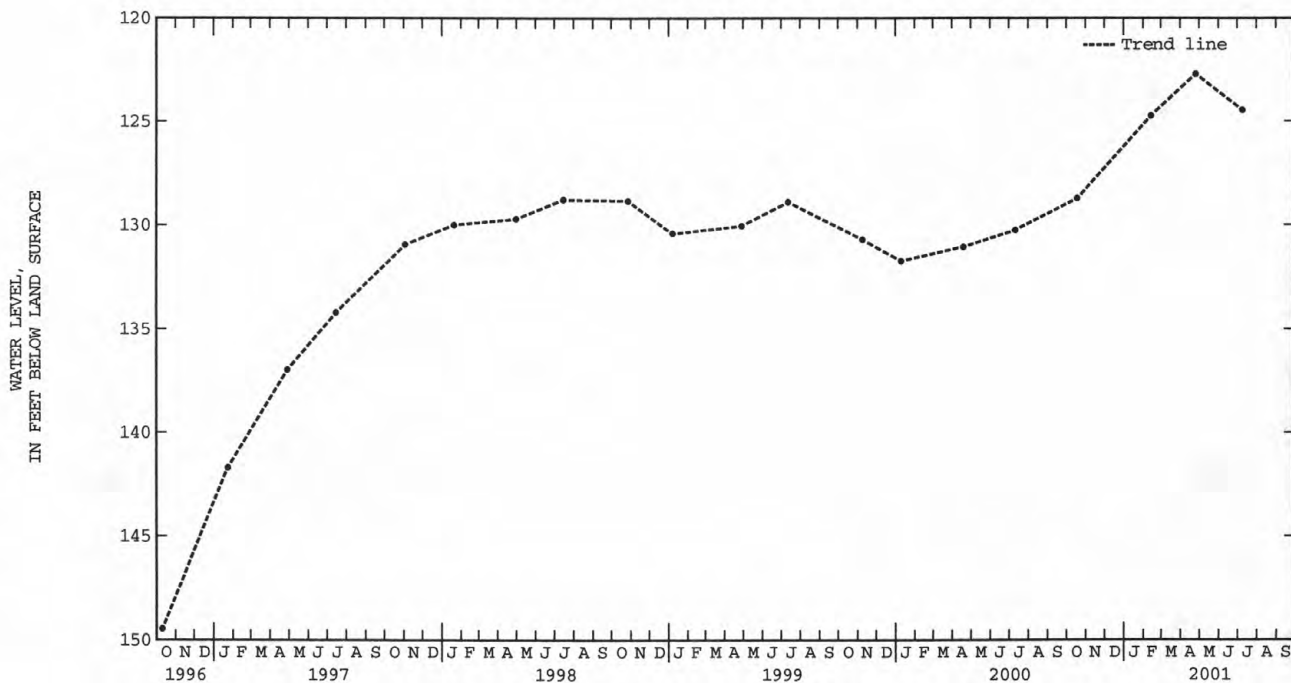
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown. Low water level in June 1996 is the result of the well being pumped for water-quality sampling.

**PERIOD OF RECORD.**--June 1985 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 33.55 ft below land-surface datum, Nov. 20, 1985; lowest measured, 158.32 ft below land-surface datum, Jul. 8, 1996.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 18	128.71	FEB 13	124.73	APR 25	122.72	JUL 09	124.47
WATER YEAR 2001		HIGHEST 122.72		APR 25, 2001		LOWEST 128.71 OCT 18, 2000	





## GROUND-WATER LEVELS

117

## GLOUCESTER COUNTY

372331076312604. Local number, 58H 8 SOW 168C.

**LOCATION.**--Lat 37°23'32", long 76°31'25", NAD83, Hydrologic Unit 02080102, at entrance to Gloucester County landfill, 0.3 mi east of U.S. Highway 17, and 1.4 mi south of Gloucester. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Columbia aquifer of Quaternary age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 40 ft, screened 30 to 40 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to Jul. 7, 1995, bimonthly measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 75 ft above sea level, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum.

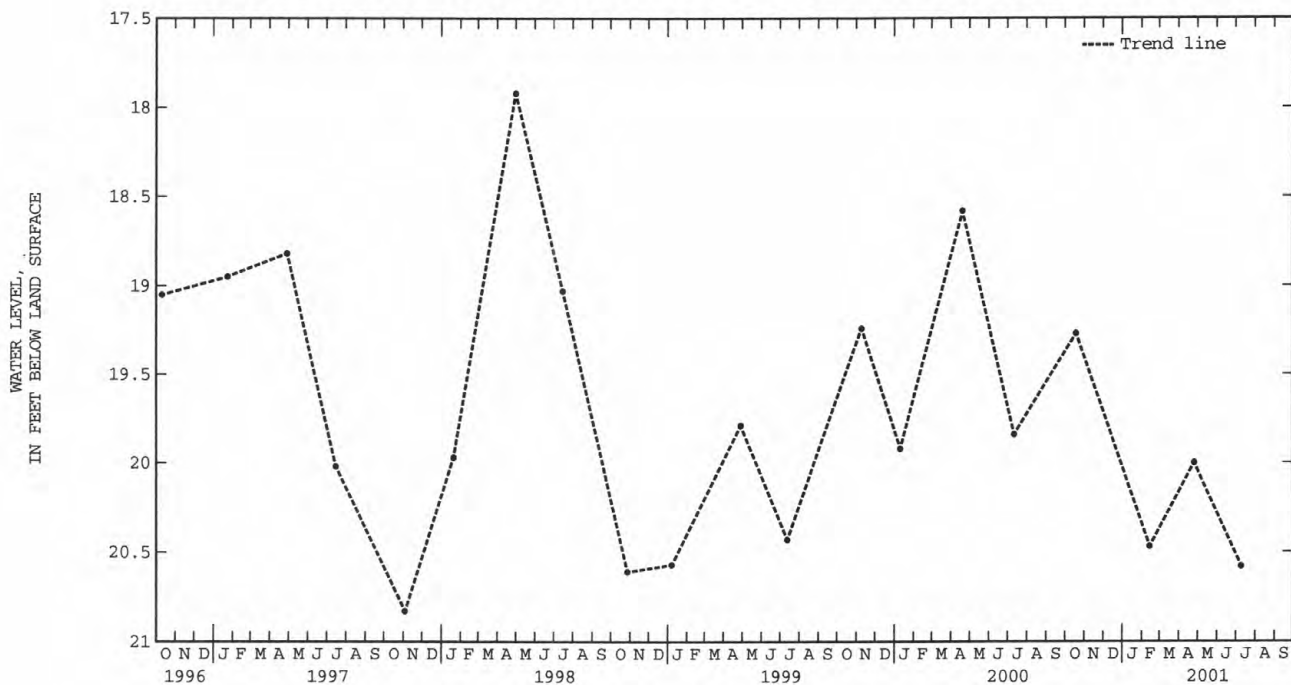
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division.

**PERIOD OF RECORD.**--June 1985 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 17.00 ft below land-surface datum, Apr. 20, 1993; lowest measured, 21.81 ft below land-surface datum, Sep. 23, 1985.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 18	19.27	FEB 13	20.47	APR 25	20.00	JUL 09	20.58
WATER YEAR 2001		HIGHEST	19.27	OCT 18, 2000	LOWEST	20.58	JUL 09, 2001



## GROUND-WATER LEVELS

## HANOVER COUNTY

375316077274701. Local number, 51M 11.

**LOCATION.**--Lat 37°53'17", long 77°27'46", NAD83, Hydrologic Unit 02080106, 900 ft east of U.S. Highway 1 on a private dirt road at the North Anna River and 9.9 mi north of Ashland on U.S. Highway 1. Owner: Weyerhaeuser Inc.

**AQUIFER.**--Newark Supergroup of late Triassic age.

**WELL CHARACTERISTICS.**--Drilled water well, diameter 6 in., depth 175 ft, cased to 20 ft, open hole 20 to 175 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by USGS personnel.

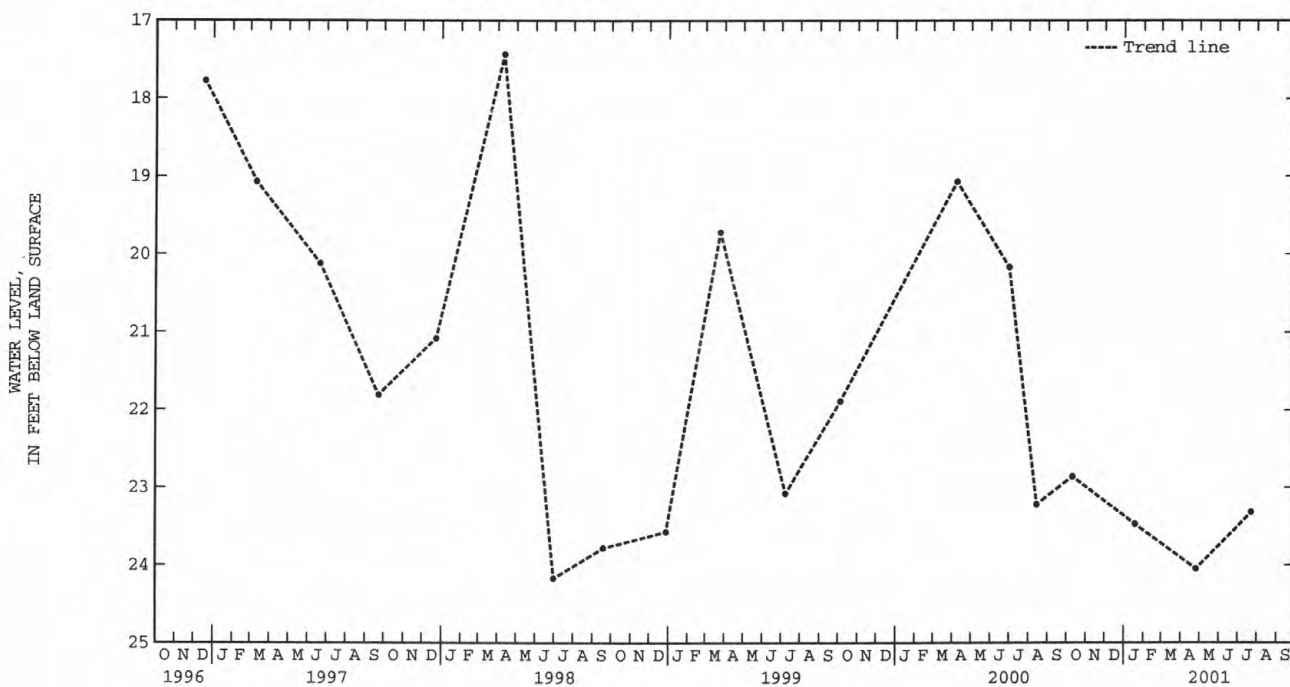
**DATUM.**--Elevation of land-surface datum is 70 ft above sea level, from topographic map. Measuring point: Top of casing, at land-surface datum.

**PERIOD OF RECORD.**--January 1984 to current year. Unpublished records available prior to October 1987 in files of the Geological Survey.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 15.17 ft below land-surface datum, Mar. 30, 1993; lowest measured, 24.17 ft below land-surface datum, June 30, 1998.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 10	22.86	JAN 18	23.47	APR 25	24.05	JUL 23	23.32
WATER YEAR 2001		HIGHEST	22.86	OCT 10, 2000	LOWEST	24.05	APR 25, 2001



## GROUND-WATER LEVELS

119

## HANOVER COUNTY

373506077171401. Local number, 52J 56.

**LOCATION.**--Lat 37°35'07", long 77°17'13", NAD83, Hydrologic Unit 02080206, 150 ft north of State Highway 156 at the Cold Harbor Visitor Center, 1.0 mi southwest of the intersection of State Highways 156 and 619, and 4.9 mi east of Mechanicsville. Owner: U.S. National Park Service.

**AQUIFER.**--Middle Potomac aquifer of Cretaceous age.

**WELL CHARACTERISTICS.**--Drilled water well, diameter 4 in., depth 265 ft, screened 210 to 220 and 255 to 270 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by USGS personnel.

**DATUM.**--Elevation of land-surface datum is 172 ft above sea level, from topographic map. Measuring point: Top of casing, 1.55 ft above land-surface datum.

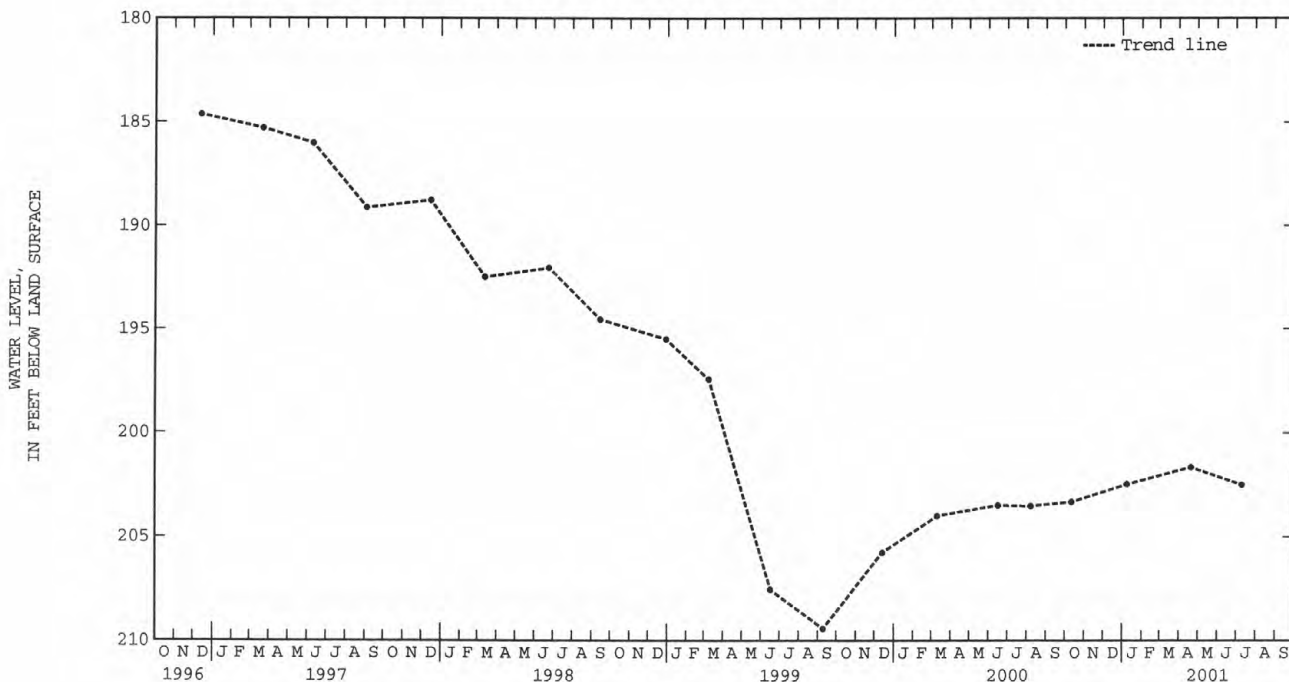
**REMARKS.**--Well was published as 373507077171201, local number 52J 10, from 1988 to 1999. Water level affected by regional drawdown.

**PERIOD OF RECORD.**--December 1988 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 177.20 ft below land-surface datum, Dec. 13, 1995; lowest measured, 209.44 ft below land-surface datum, Sep. 9, 1999.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 11	203.33	JAN 08	202.46	APR 20	201.66	JUL 10	202.49
WATER YEAR 2001		HIGHEST	201.66	APR 20, 2001		LOWEST	203.33
							OCT 11, 2000



## GROUND-WATER LEVELS

## HANOVER COUNTY

373737077083201. Local number, 53K 19 SOW 080.

**LOCATION.**--Lat 37°37'38", long 77°08'31", NAD83, Hydrologic Unit 02080106, 500 ft northeast of State Highway 606, 0.15 mi west of intersection of State Highways 606 and 629, and 4.6 mi east of Old Church. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Yorktown-Eastover aquifer of Miocene-Pliocene age.

**WELL CHARACTERISTICS.**--Dug unused water well, diameter 30 in., depth 35 ft, cased to 35 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 3, 1985 to July 11, 1995, bimonthly measurement with chalked tape. May 20, 1978, to Oct. 2, 1985, occasional measurement with chalked tape. Prior to May 20, 1978, continuous strip-chart recorder.

**DATUM.**--Elevation of land-surface datum is 130 ft above sea level, from topographic map. Measuring point: Top of casing, 0.85 ft above land-surface datum.

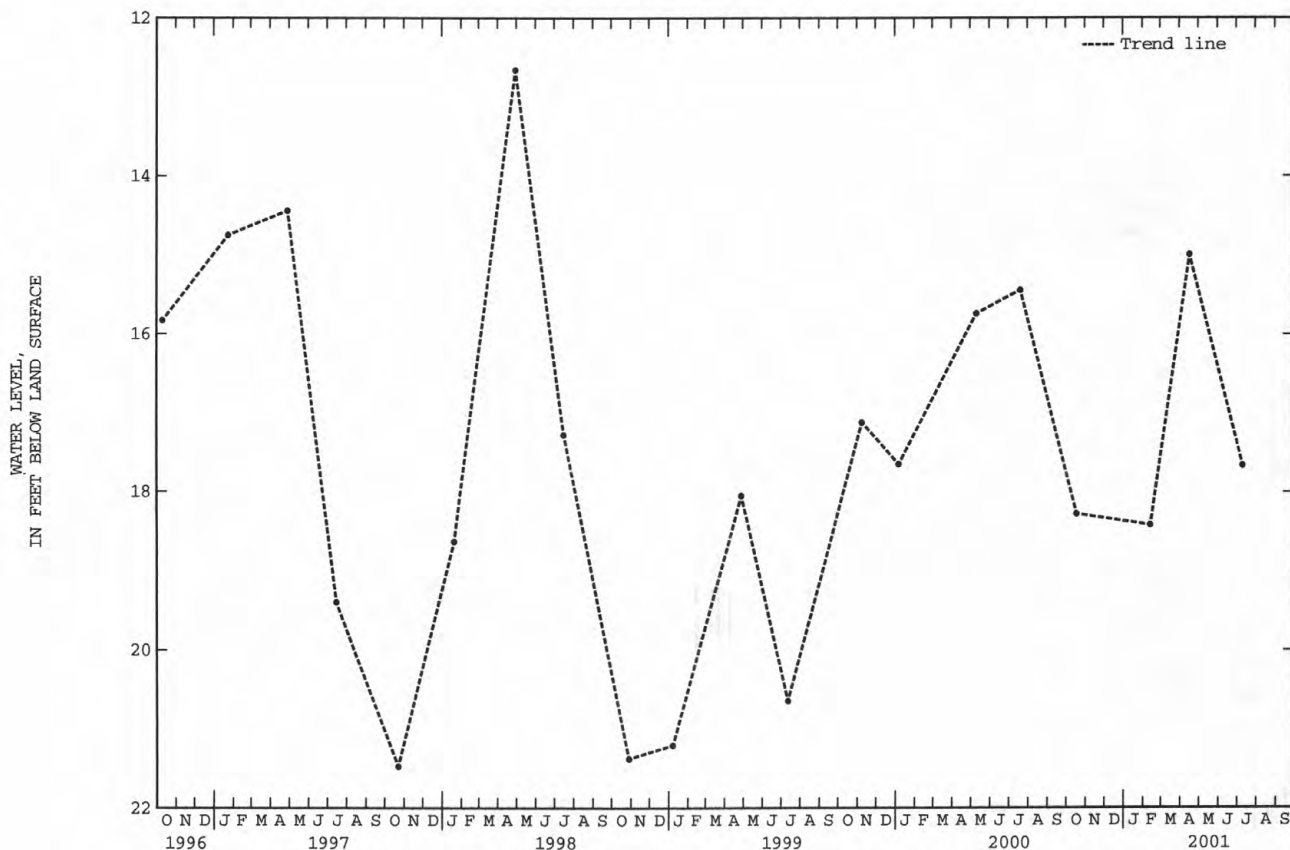
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division.

**PERIOD OF RECORD.**--January 1978 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 11.05 ft below land-surface datum, Jan. 25, 1978; lowest measured, 22.85 ft below land-surface datum, Aug. 3, 1984.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 18	18.28	FEB 13	18.42	APR 17	14.99	JUL 11	17.66
WATER YEAR 2001		HIGHEST	14.99	APR 17, 2001	LOWEST	18.42	FEB 13, 2001



## GROUND-WATER LEVELS

121

## HENRICO COUNTY

373607077331401. Local number, 50J 1 SOW 023.

**LOCATION.**--Lat 37°36'08", long 77°33'13", NAD83, Hydrologic Unit 02080205, 200 ft north of Three Chopt Road, 1.0 mi southeast of intersection of Three Chopt Road and Parham Road in Richmond. Owner: E. L. Gilman.

**AQUIFER.**--Petersburg Granite of Mississippian age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 10 in., depth 300 ft, cased to 68 ft, open hole 68 to 300 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to Jul. 17, 1995, bimonthly measurement with chalked tape. Jun. 5, 1974, to Sep. 30, 1985, occasional measurement with chalked tape. Prior to Jun. 5, 1974, continuous strip-chart recorder.

**DATUM.**--Elevation of land-surface datum is 275 ft above sea level, from topographic map. Measuring point: Top of casing, 1.88 ft above land-surface datum.

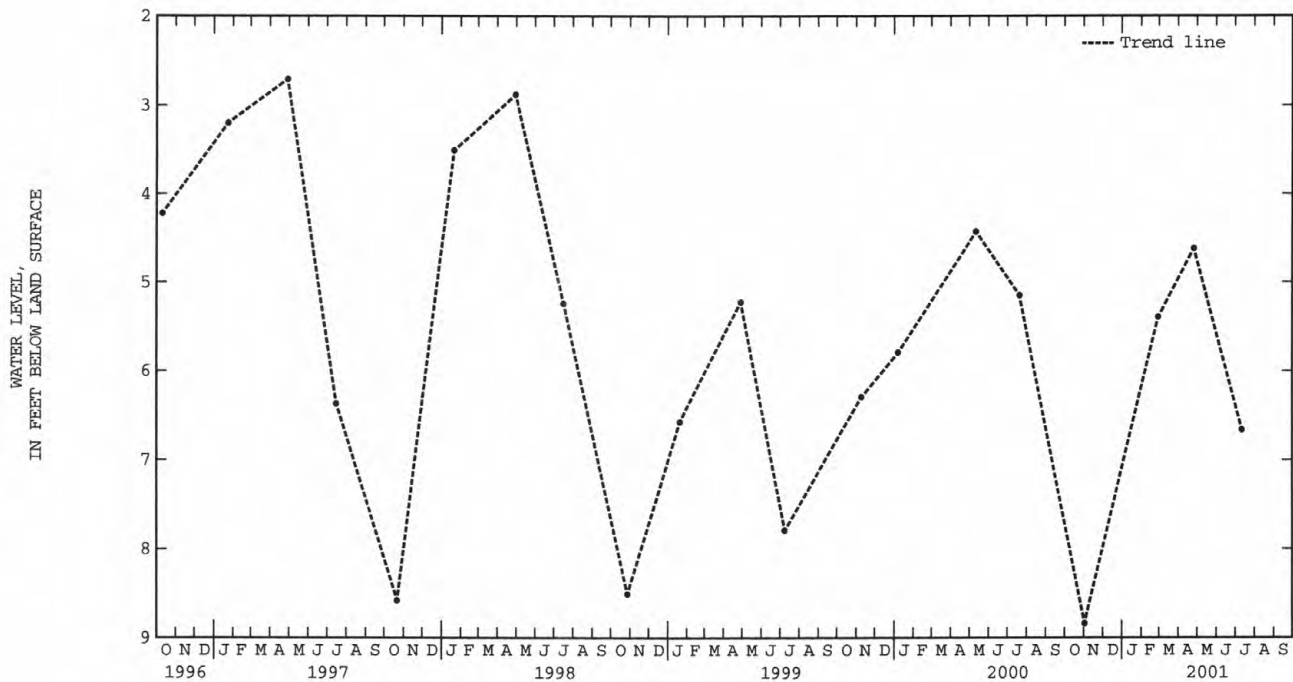
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division.

**PERIOD OF RECORD.**--May 1969 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level recorded, 1.48 ft below land-surface datum, Jun. 5, 1970; lowest recorded, 10.43 ft below land-surface datum, Jan. 5, 1971.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 01	8.84	FEB 27	5.39	APR 25	4.62	JUL 11	6.66
WATER YEAR 2001		HIGHEST	4.62	APR 25, 2001		LOWEST	8.84 NOV 01, 2000



## GROUND-WATER LEVELS

## HENRICO COUNTY

373428077233001. Local number, 51J 13.

**LOCATION.**--Lat 37°34'29", long 77°23'29", NAD83, Hydrologic Unit 02080206, 1,600 ft east of the intersection of U.S. Highway 360 (Mechanicsville Turnpike) and Laburnum Avenue and 500 ft south of Laburnum Avenue at water tower. Owner: Henrico County.

**AQUIFER.**--Middle Potomac aquifer of Cretaceous age.

**WELL CHARACTERISTICS.**--Drilled unused water well, diameter 8 in. to 167 ft, diameter 6 in. from 167 to 275 ft, depth 275 ft, screened 167 to 186 ft, 213 to 226 ft, 248 to 258 ft.

**INSTRUMENTATION.**--Weekly measurements by Henrico County personnel and occasional measurements with chalked tape by USGS personnel. Prior to Apr. 2, 1992, digital recorder 60-minute punch.

**DATUM.**--Elevation of land-surface datum is 168 ft above sea level, from topographic map. Measuring point: Top of casing, 1.7 ft above land-surface datum prior to Apr. 8, 1992; 0.2 ft thereafter.

**REMARKS.**--Water level affected by local pumpage and regional drawdown.

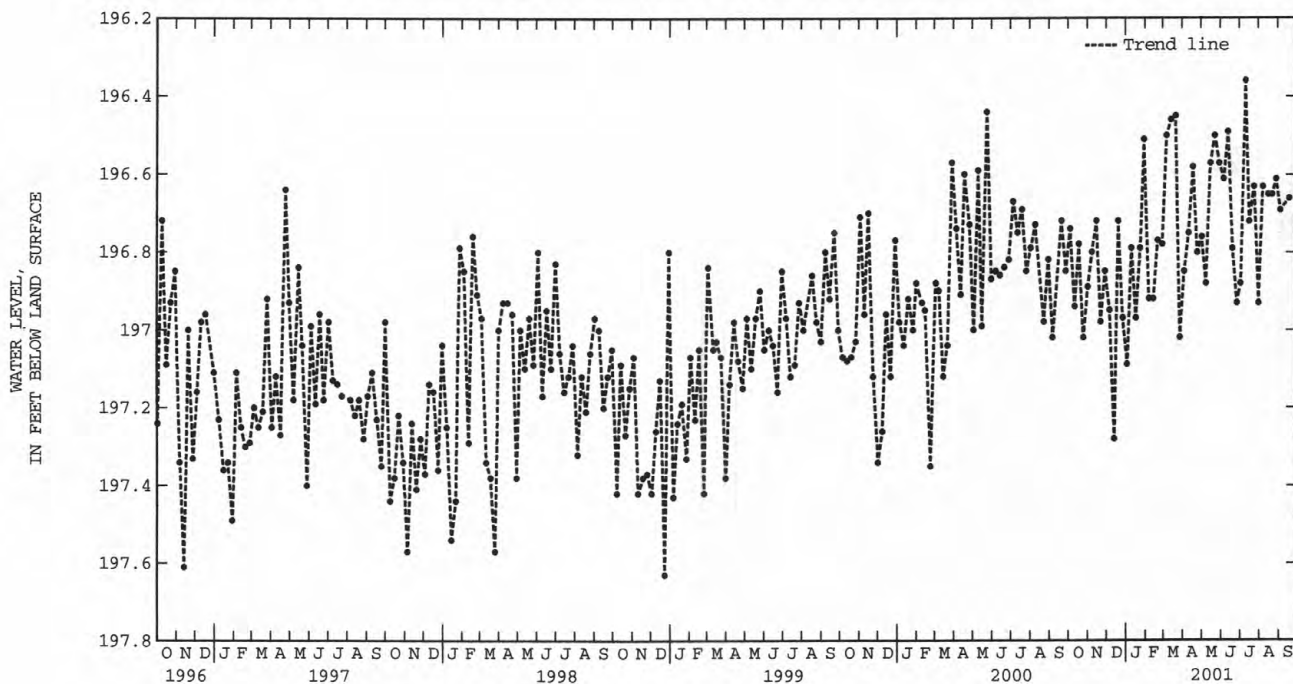
**PERIOD OF RECORD.**--January 1988 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level recorded, 190.85 ft below land-surface datum, Apr. 7, 1988; lowest measured, 197.63 ft below land-surface datum, Dec. 23, 1998.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 04	196.74	DEC 06	196.95	FEB 07	196.92	APR 11	196.75	JUN 13	196.49	AUG 17	196.65
11	196.94	13	197.28	14	196.92	18	196.58	20	196.79	23	196.65
18	196.78	20	196.72	21	196.77	25	196.80	27	196.93	29	196.61
25	197.02	27	196.97	28	196.78	MAY 02	196.76	JUL 03	196.88	SEP 05	196.69
NOV 01	196.89	JAN 03	197.09	MAR 07	196.50	09	196.88	11	196.36	19	196.66
08	196.80	10	196.79	14	196.46	16	196.57	17	196.72		
15	196.72	17	196.97	21	196.45	23	196.50	25	196.63		
22	196.98	24	196.79	28	197.02	30	196.57	AUG 01	196.93		
29	196.85	30	196.51	APR 04	196.85	JUN 06	196.61	08	196.63		

WATER YEAR 2001      HIGHEST 196.36 JUL 11, 2001      LOWEST 197.28 DEC 13, 2000





## GROUND-WATER LEVELS

123

## HENRICO COUNTY

373817077282501. Local number, 51K 14 SOW 137.

**LOCATION.**--Lat 37°38'18", long 77°28'24", NAD83, Hydrologic Unit 02080206, 50 ft east of entrance to J. Sargeant Reynolds Community College, 0.9 mi west of intersection of Parham Road and U.S. Highway 1, and 0.9 mi west of Yellow Tavern. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Petersburg Granite of Mississippian age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 6 in., depth 280 ft, cased to 35 ft, open hole 35 to 280 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sep. 30, 1985, to Jul. 17, 1995, bimonthly measurement with chalked tape. Prior to Sep. 30, 1985, monthly measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 180 ft above sea level, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum prior to Sep. 9, 1980; 1.5 ft thereafter.

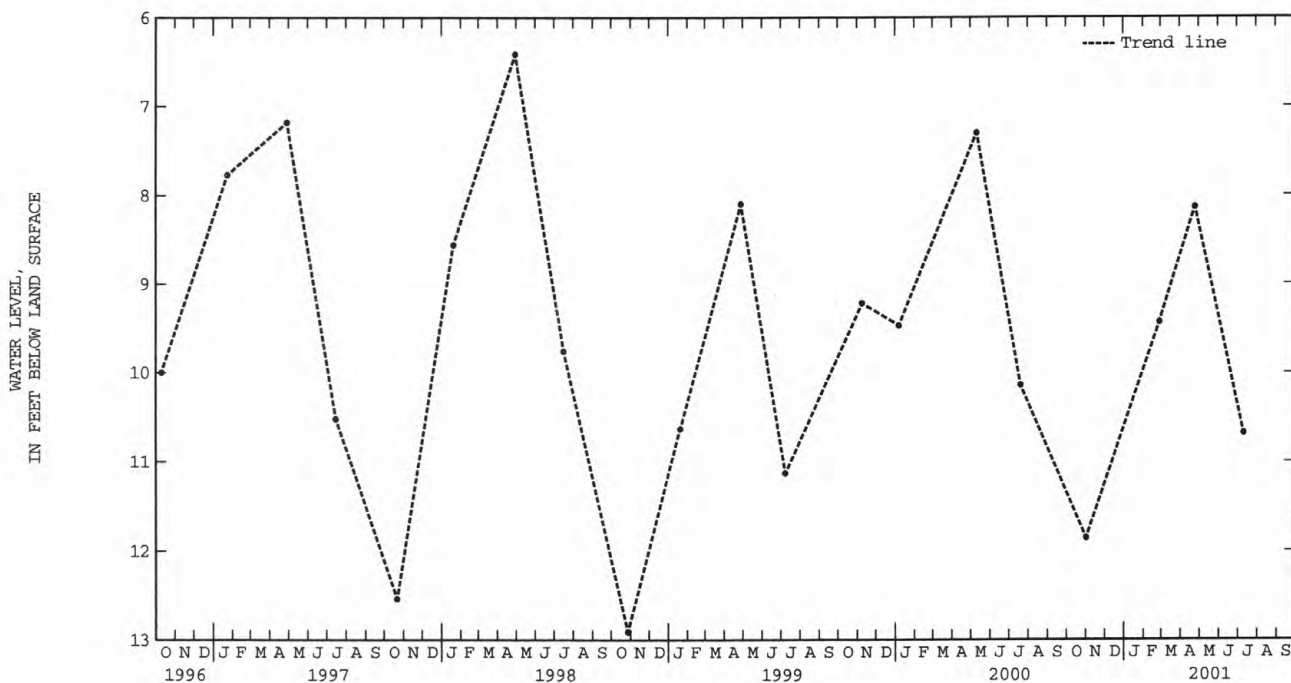
**REMARKS.**--Well was published as 373817077282501, local number 51K 4, from 1980 to 2000. Records provided by the Virginia Department of Environmental Quality - Water Division.

**PERIOD OF RECORD.**--April 1980 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 3.37 ft below land-surface datum, Apr. 30, 1987; lowest measured, 12.91 ft below land-surface datum, Oct. 27, 1998.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 01	11.86	FEB 27	9.43	APR 25	8.14	JUL 11	10.68
WATER YEAR 2001		HIGHEST	8.14	APR 25, 2001		LOWEST	11.86
							NOV 01, 2000



## GROUND-WATER LEVELS

## HENRICO COUNTY

372936077211101. Local number, 52H 3 SOW 136.

**LOCATION.**--Lat 37°29'37", long 77°21'10", NAD83, Hydrologic Unit 02080206, 100 ft west of Laburnum Avenue, 0.9 mi north of intersection of Laburnum Avenue and Darbytown Road, and 2.4 mi southwest of Sandston. Owner: Nabisco Incorporated.

**AQUIFER.**--Middle Potomac aquifer of Cretaceous age.

**WELL CHARACTERISTICS.**--Drilled unused water well, diameter 6 in., depth 209 ft, screened 149 to 159 ft, 199 to 209 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Mar. 25, 1985, to Jul. 17, 1995, bimonthly measurement with chalked tape. Prior to Mar. 25, 1985, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 150 ft above sea level, from topographic map. Measuring point: Top of casing, 1.0 ft above land-surface datum.

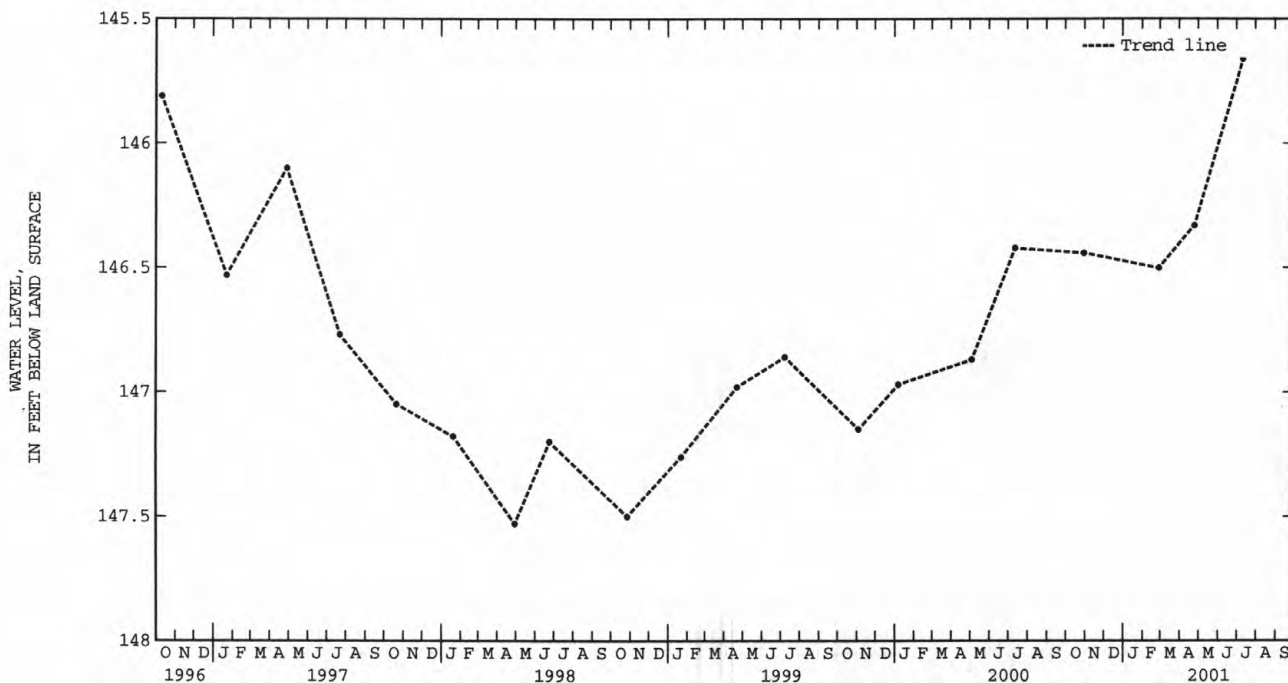
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

**PERIOD OF RECORD.**--December 1974 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 131.42 ft below land-surface datum, Dec. 2, 1974; lowest measured, 147.53 ft below land-surface datum, Apr. 29, 1998.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30	146.44	FEB 27	146.50	APR 25	146.33	JUL 11	145.66
WATER YEAR 2001		HIGHEST	145.66	JUL 11, 2001		LOWEST	146.50
						FEB 27, 2001	



## GROUND-WATER LEVELS

125

## HENRICO COUNTY

372538077221501. Local number, 52H 16.

**LOCATION.**--Lat 37°25'39", long 77°22'14", NAD83, Hydrologic Unit 02080206, at Richmond National Battlefields Park - Fort Harrison Unit, 800 ft east of visitors center. Owner: U.S. Geological Survey.

**AQUIFER.**--Yorktown-Eastover aquifer of Miocene-Pliocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 2 in., depth 34.25 ft, screened 24.25 ft to 34.25 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Unpublished digital recorder data November 13, 1995, to May 8, 1996.

**DATUM.**--Elevation of land-surface datum is 135 ft above sea level. Measuring point: Top of casing, 1.43 ft above land-surface datum.

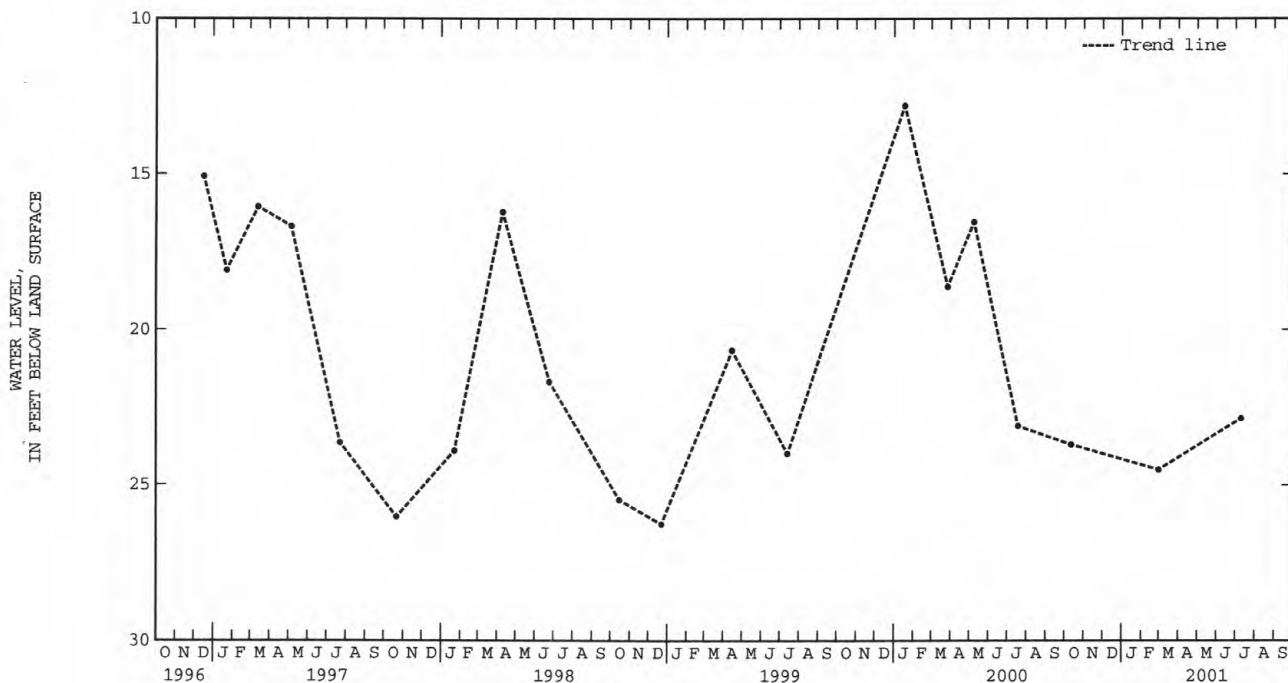
**REMARKS.**--Records provided by Virginia Department of Environmental Quality - Water Division.

**PERIOD OF RECORD.**--November 1995 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 12.80 ft below land-surface datum, Jan. 17, 2000; lowest measured, 26.27 ft below land-surface datum, Nov. 13, 1995.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL		
OCT 11	23.70	FEB 28	24.51	JUL 10	22.86		
WATER YEAR 2001		HIGHEST	22.86	JUL 10, 2001	LOWEST	24.51	FEB 28, 2001



## GROUND-WATER LEVELS

## HENRICO COUNTY

372538077221502. Local number, 52H 17.

**LOCATION.**--Lat 37°25'39", long 77°22'14", NAD83, Hydrologic Unit 02080206, at Richmond National Battlefields Park - Fort Harrison Unit, 800 ft east of visitors center. Owner: U.S. Geological Survey.

**AQUIFER.**--Aquia aquifer of Paleocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 2 in., depth 78.90 ft, screened 73.90 ft to 78.90 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Unpublished digital recorder data Apr. 3, 1996, to May 8, 1996.

**DATUM.**--Elevation of land-surface datum is 135 ft above sea level. Measuring point: Top of casing, 1.50 ft above land-surface datum.

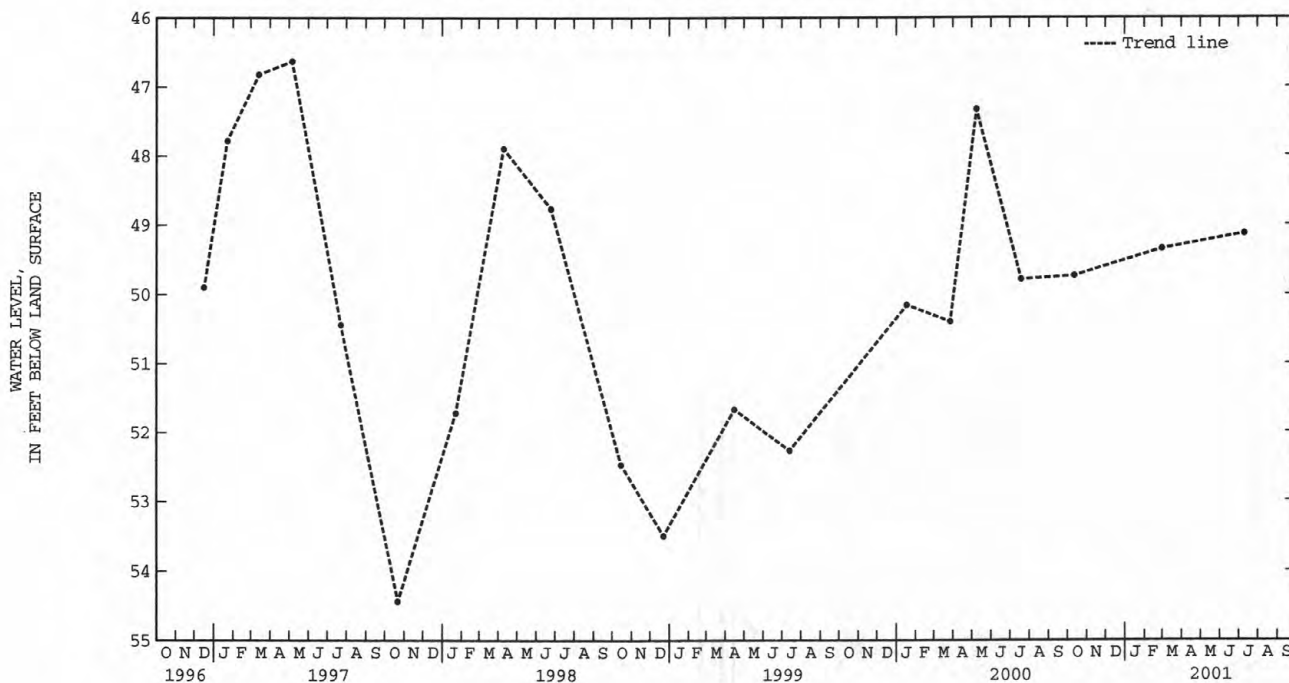
**REMARKS.**--Records provided by Virginia Department of Environmental Quality - Water Division.

**PERIOD OF RECORD.**--November 1995 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 46.63 ft below land-surface datum, May 5, 1997; lowest measured, 54.44 ft below land-surface datum, Oct. 21 1997.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL			
OCT 11	49.74	FEB 28	49.35	JUL 10	49.13			
WATER YEAR 2001		HIGHEST	49.13	JUL 10, 2001	LOWEST	49.74	OCT 11, 2000	



373301077194001. Local number, 52J 1.

**AQUIFER.**--Middle Potomac aquifer of Cretaceous age.

**INSTRUMENTATION.**--Weekly measurements by Henrico County personnel and occasional measurements with chalked tape by USGS personnel. Prior to Apr. 2, 1992, digital recorder 60-minute punch.

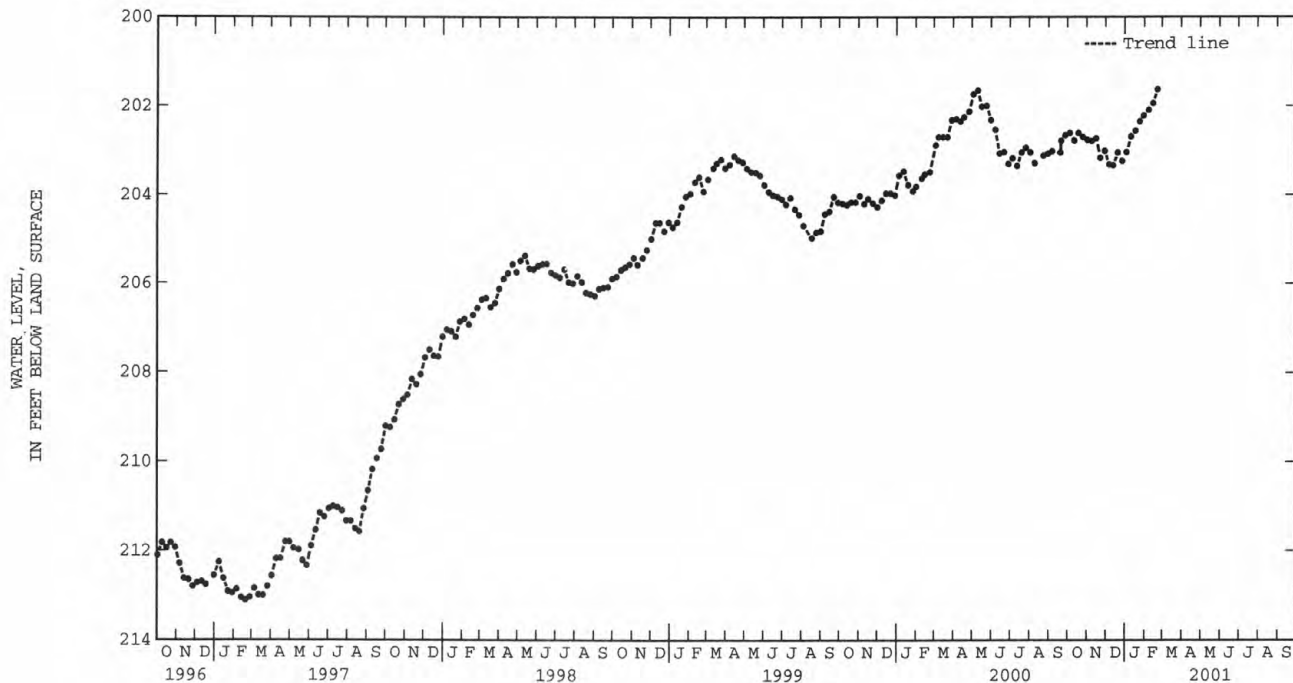
**REMARKS.**--Water level affected by local pumpage and regional drawdown.

**PERIOD OF RECORD.**--January 1988 to February 2001 (discontinued).

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level recorded, 197.64 ft below land-surface datum, Jan. 25, 26, 1988; lowest measured, 213.11 ft below land-surface datum, Feb. 19, 1997.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE		WATER LEVEL		DATE		WATER LEVEL		DATE		WATER LEVEL		DATE		WATER LEVEL			
OCT	04	202.61	NOV	01	202.77	NOV	29	203.01	DEC	27	203.24	JAN	24	202.35	FEB	21	201.63
	11	202.78		08	202.79		06	203.32		03	203.04		30	202.22			
	18	202.61		15	202.73		13	203.34		10	202.69		07	202.09			
	25	202.70		22	203.17		20	203.05		17	202.56		14	201.94			
WATER YEAR 2001			HIGHEST 201.63			FEB 21, 2001			LOWEST 203.34			DEC 13, 2000					



## GROUND-WATER LEVELS

## HENRICO COUNTY

373125077185001. Local number, 52J 34.

**LOCATION.**--Lat 37°31'26", long 77°18'49", NAD83, Hydrologic Unit 02080206, at the intersection of U.S. Highway 60 (Williamsburg Road) and Finley Drive and 200 ft east of Finley Drive. Owner: Henrico County.

**AQUIFER.**--Lower Potomac aquifer of Cretaceous age.

**WELL CHARACTERISTICS.**--Drilled unused water well, diameter 10 in. to 165 ft, diameter 8 in. from 165 to 272 ft, depth 272 ft, screened 222 to 265 ft.

**INSTRUMENTATION.**--Weekly measurements by Henrico County personnel and occasional measurements with chalked tape by USGS personnel. Prior to Feb. 18, 1992, digital recorder 60-minute punch.

**DATUM.**--Elevation of land-surface datum is 162 ft above sea level, from topographic map. Measuring point: Top of casing, 0.9 ft above land-surface datum.

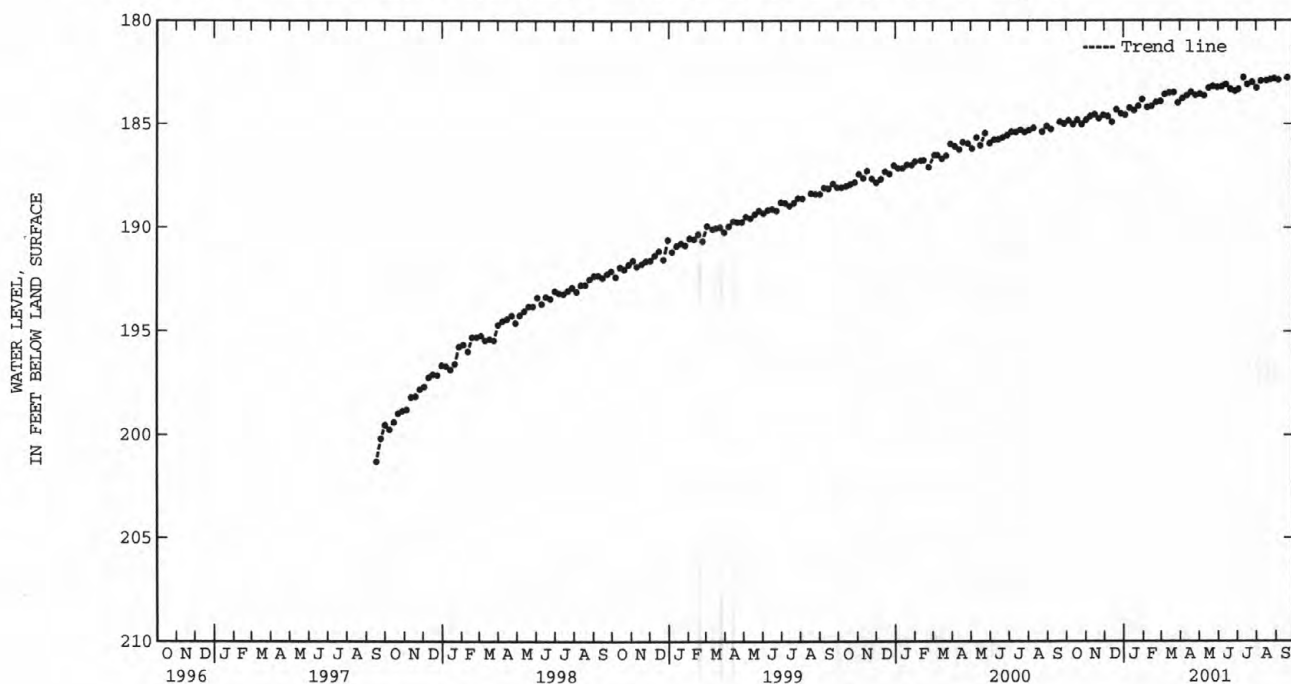
**REMARKS.**--Water level affected by local pumpage and regional drawdown.

**PERIOD OF RECORD.**--January 1988 to June 1996, September 1997 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 182.75 ft below land-surface datum, Jul. 11, 2001; lowest measured, 204.90 ft below land-surface datum, Jun. 26, 1996.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 04	184.82	DEC 06	184.63	FEB 07	184.19	APR 11	183.63	JUN 13	183.09	AUG 17	182.90
11	185.01	13	184.90	14	184.15	18	183.45	20	183.31	23	182.86
18	184.80	20	184.30	21	183.95	25	183.61	27	183.41	29	182.80
25	185.01	27	184.51	28	183.90	MAY 02	183.55	JUL 03	183.32	SEP 05	182.87
NOV 01	184.80	JAN 03	184.56	MAR 07	183.56	09	183.63	11	182.75	19	182.76
08	184.63	10	184.22	14	183.49	16	183.25	17	183.09		
15	184.53	17	184.35	21	183.47	23	183.18	25	182.98		
22	184.74	24	184.14	28	183.98	30	183.23	AUG 01	183.25		
29	184.57	30	183.81	APR 04	183.77	JUN 06	183.20	08	182.92		
WATER YEAR 2001		HIGHEST	182.75	JUL 11, 2001	LOWEST	185.01	OCT 11, 2000	OCT 25, 2000			





## GROUND-WATER LEVELS

129

## ISLE OF WIGHT COUNTY

364059076544901. Local number, 55B 16.

**LOCATION.**--Lat 36°41'00", long 76°54'48", NAD83, Hydrologic Unit 03010202, off U.S. Highways 258 and 58, 200 ft west of the intersection of U.S. Highways 258 and 58 and Lynn Road, and 0.3 mi east of Franklin. Owner: International Paper Company, formerly Union Camp Corporation.

**AQUIFER.**--Middle Potomac aquifer of Cretaceous age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 6 in., depth 305 ft, screened 285 to 305 ft.

**INSTRUMENTATION.**--Electronic data logger, 60-minute record interval. May 27, 1988 to Nov. 3, 1999, digital recorder 60-minute punch. Prior to May 27, 1988, continuous strip-chart recorder.

**DATUM.**--Elevation of land-surface datum is 25 ft above sea level, from topographic map. Measuring point: Top of casing, 0.45 ft above land-surface datum.

**REMARKS.**--Missing record due to recorder malfunction. Water level affected by local pumpage and regional drawdown.

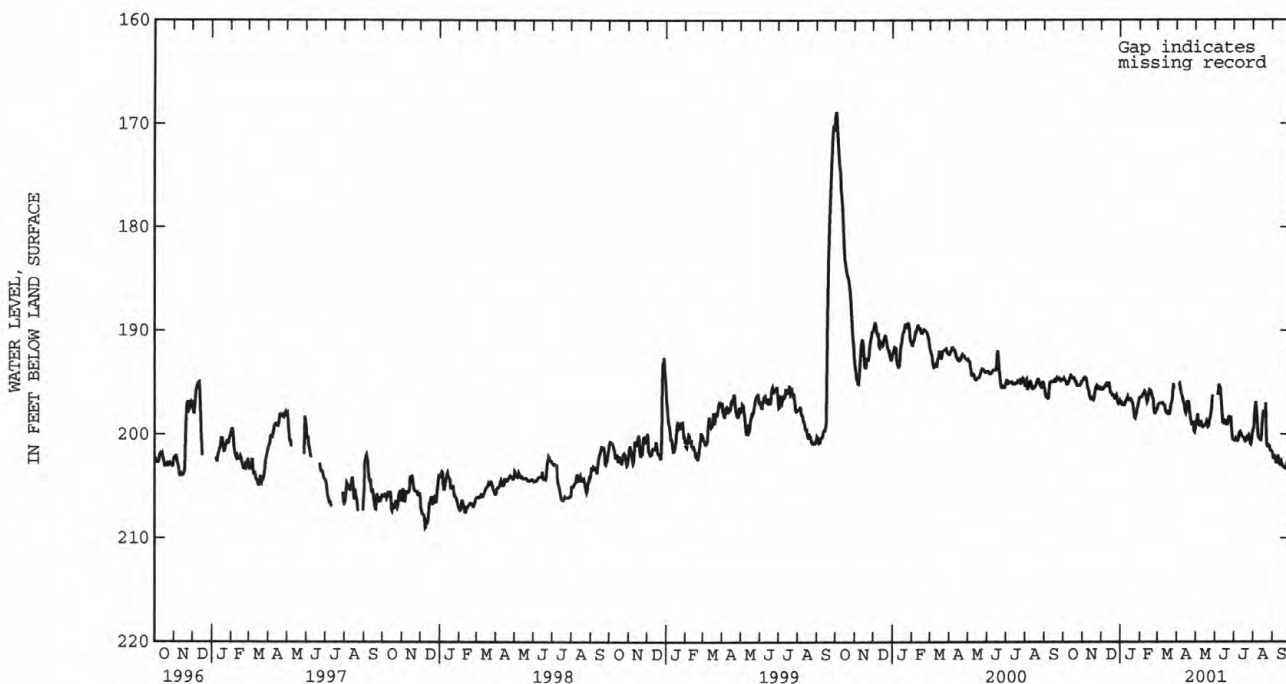
**PERIOD OF RECORD.**--June 1960 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level recorded, 99.00 ft below land-surface datum, Dec. 27, 1960; lowest recorded, 216.72 ft below land-surface datum, May 23, 1992.

**EXTREMES FOR CURRENT YEAR.**--Highest instantaneous water level, 194.20 ft below land-surface datum, Oct. 13; lowest instantaneous water level, 203.31 ft below land-surface datum, Sep. 22-23.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	194.89	194.69	195.53	197.13	196.23	197.03	195.18	198.88	196.23	200.54	196.90	202.25
10	194.87	195.69	195.35	196.67	196.19	197.16	196.71	198.96	196.25	199.79	200.27	202.01
15	194.51	196.64	196.00	196.70	195.94	197.95	197.97	199.11	198.94	200.26	199.03	202.60
20	194.91	196.10	196.26	196.99	196.38	198.03	197.11	199.29	199.05	200.63	198.24	203.23
25	195.30	195.60	196.25	198.18	197.98	196.08	198.93	198.08	198.46	200.18	201.17	202.65
EOM	194.89	195.43	197.06	196.49	197.60	---	199.48	---	200.51	199.63	201.67	201.95



## GROUND-WATER LEVELS

## ISLE OF WIGHT COUNTY

364125076544801. Local number, 55B 36.

**LOCATION.**--Lat 36°41'26", long 76°54'47", NAD83, Hydrologic Unit 03010202, on Lynn Road, 0.45 mi north of intersection with U.S. Highways 258 and 58, and 0.7 mi northeast of Franklin. Owner: International Paper Company, formerly Union Camp Corporation.

**AQUIFER.**--Lower Potomac aquifer of Cretaceous age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 860 ft, screened 720 to 725 ft, 800 to 805 ft, 855 to 860 ft.

**INSTRUMENTATION.**--Occasional measurements with chalked tape by USGS personnel. October 1986 to August 1993, continuous strip-chart recorder. September 1983 to October 1986, occasional measurement with chalked tape. October 1982 to September 1983, continuous strip-chart recorder. November 1972 to October 1982, occasional measurement with chalked tape. July 1969 to November 1972, continuous strip-chart recorder. Prior to July 1969, continuous strip-chart recorder and occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 37 ft above sea level, from topographic map. Measuring point: Top of casing, 4.56 ft above land-surface datum.

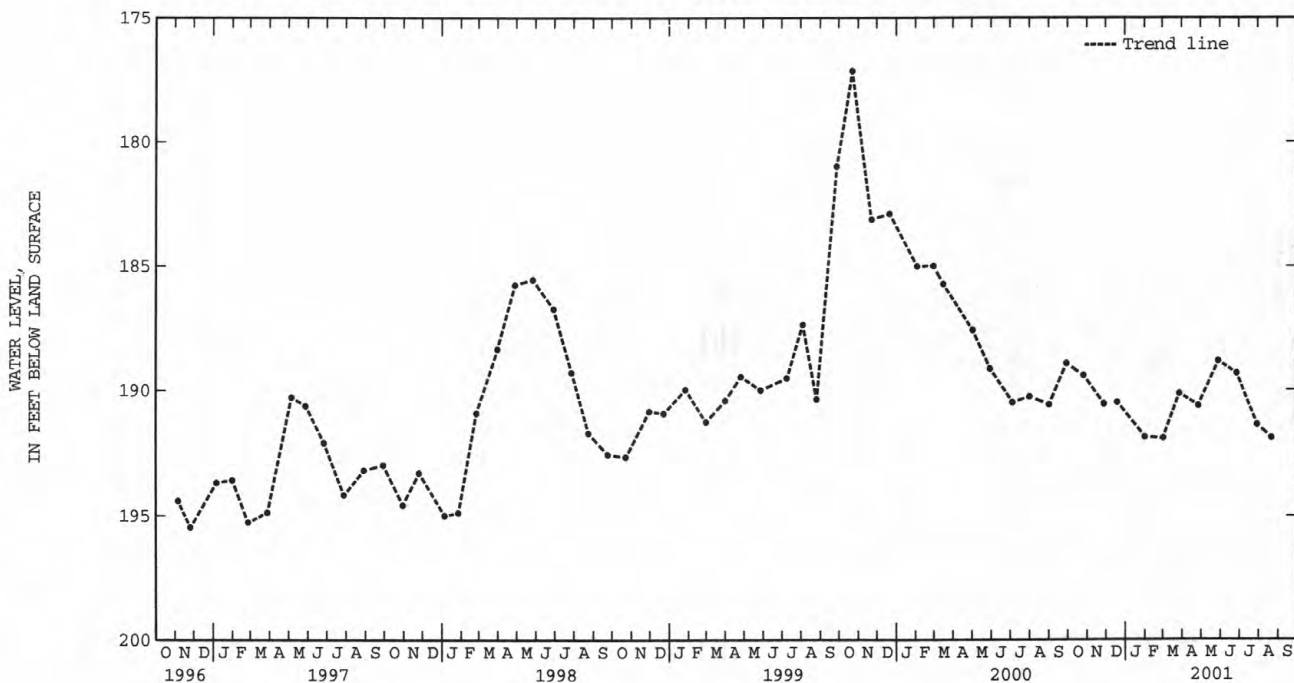
**REMARKS.**--Water level affected by local pumpage and regional drawdown. Water from this well is known to contain concentrations of dissolved solids greater than 1,000 mg/L.

**PERIOD OF RECORD.**--March 1969 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level recorded, 156.65 ft below land-surface datum, Dec. 27, 1969; lowest measured, 219.29 ft below land-surface datum, May 18, 1978.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	189.41	DEC 19	190.48	MAR 02	191.91	APR 27	190.62	JUN 27	189.33	AUG 22	191.91
NOV 28	190.55	FEB 01	191.87	28	190.13	MAY 29	188.83	JUL 30	191.38		
WATER YEAR 2001		HIGHEST	188.83	MAY 29, 2001		LOWEST	191.91	MAR 02, 2001		AUG 22, 2001	



## GROUND-WATER LEVELS

131

## ISLE OF WIGHT COUNTY

364101076544803. Local number, 55B 62 SOW 096B.

**LOCATION.**--Lat 36°41'02", long 76°54'47", NAD83, Hydrologic Unit 03010202, 200 ft northwest of intersection of U.S. Highways 58 and 258 and Lynn Road, 0.3 mi east of Franklin. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Yorktown-Eastover aquifer of Miocene-Pliocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 3 in., depth 30.77 ft, screened 25 to 30 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by USGS personnel. Oct. 1, 1987 to Oct. 8, 1995, digital recorder 60-minute punch. Prior to Oct. 1, 1987, occasional measurement with chalked tape.

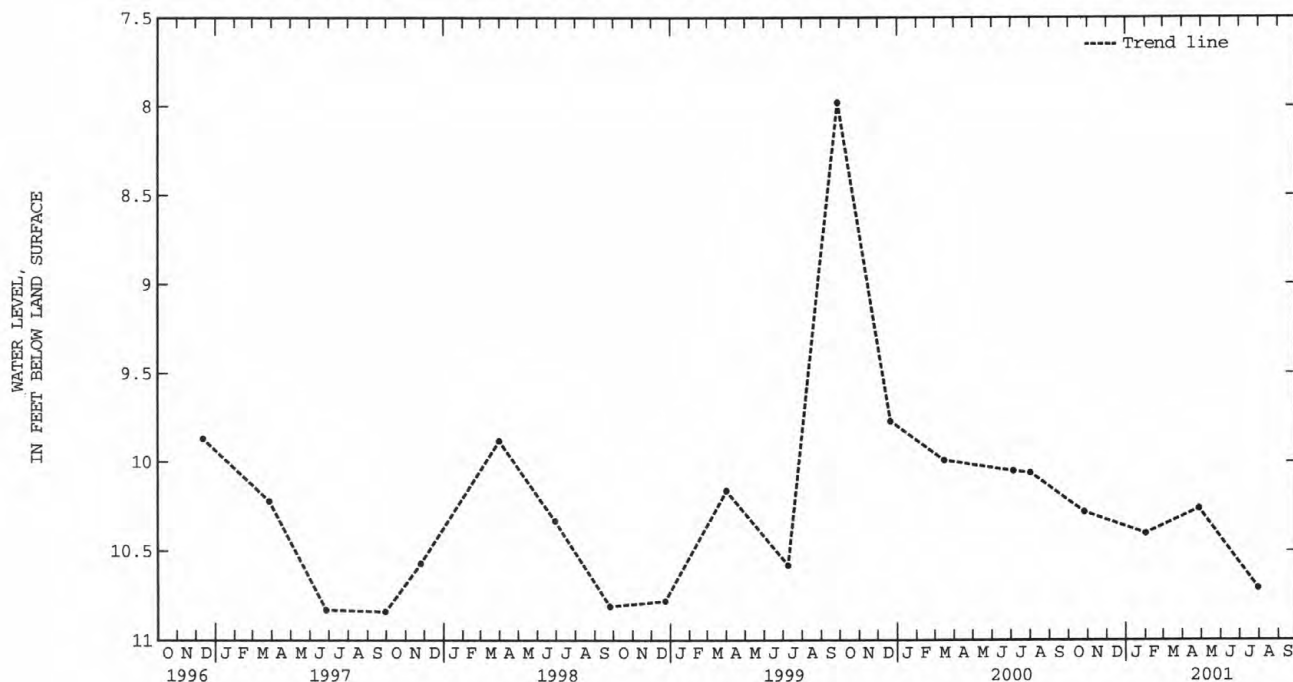
**DATUM.**--Elevation of land-surface datum is 27 ft above sea level, from topographic map. Measuring point: Top of casing, 2.15 ft above land-surface datum.

**PERIOD OF RECORD.**--May 1979, October 1980 to September 1981, October 1982 to September 1983, October 1984 to current year. Unpublished records available prior to October 1985 in files of the Geological Survey.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level recorded, 7.98 ft below land-surface datum, Sep. 27, 1999; lowest measured, 15.38 ft below land-surface datum, Oct. 17, 1980.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	10.28	FEB 01	10.40	APR 27	10.26	JUL 30	10.71
WATER YEAR 2001		HIGHEST	10.26	APR 27, 2001	LOWEST	10.71	JUL 30, 2001



## GROUND-WATER LEVELS

## ISLE OF WIGHT COUNTY

364814076440701. Local number, 57C 25 SOW 149A.

**LOCATION.**--Lat 36°48'15", long 76°44'06", NAD83, Hydrologic Unit 02080208, at Windsor Community Center in Windsor. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Columbia aquifer of Quaternary age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 26 ft, screened 16 to 26 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to Jul. 19, 1985, bimonthly measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 70 ft above sea level, from topographic map. Measuring point: Top of casing, 1.2 ft above land-surface datum.

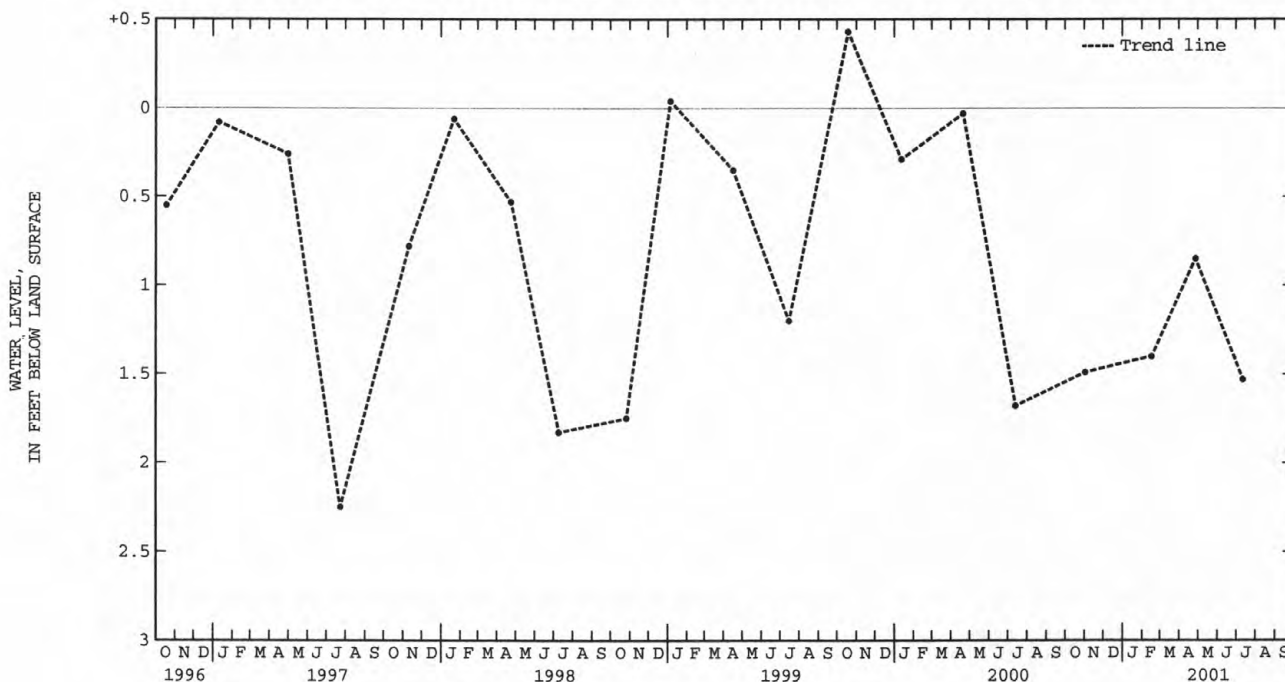
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division.

**PERIOD OF RECORD.**--March 1985 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 0.43 ft above land-surface datum, Oct. 18, 1999; lowest measured, 3.29 ft below land-surface datum, Jul. 22, 1986.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 02	1.49	FEB 16	1.40	APR 27	.85	JUL 12	1.53
WATER YEAR 2001		HIGHEST	.85	APR 27, 2001		LOWEST	1.53 JUL 12, 2001



## GROUND-WATER LEVELS

133

## ISLE OF WIGHT COUNTY

364814076440702. Local number, 57C 26 SOW 149B.

**LOCATION.**--Lat 36°48'15", long 76°44'06", NAD83, Hydrologic Unit 02080208, at Windsor Community Center in Windsor. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Brightseat-upper Potomac aquifer of Cretaceous-Paleocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 380 ft, screened 370 to 380 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to Jul. 19, 1995, bimonthly measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 70 ft above sea level, from topographic map. Measuring point: Top of casing, 1.2 ft above land-surface datum.

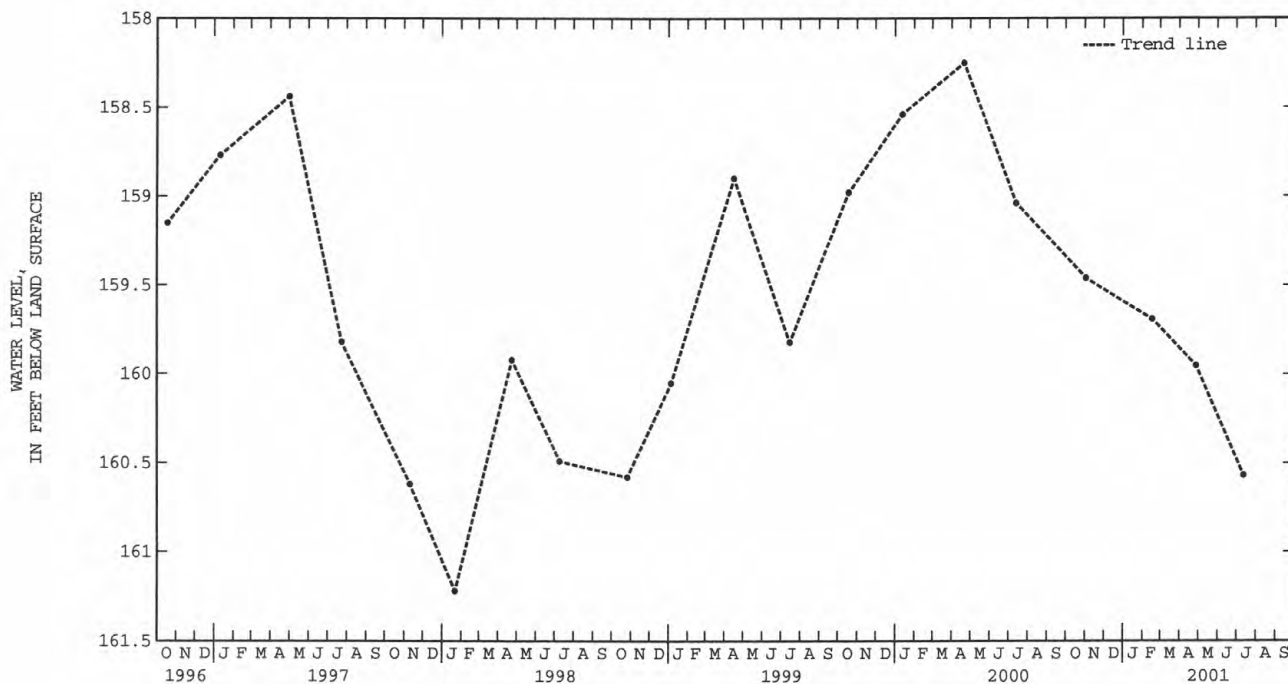
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage and regional drawdown.

**PERIOD OF RECORD.**--March 1985 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 144.42 ft below land-surface datum, Feb. 25, 1986; lowest measured, 168.14 ft below land-surface datum, Feb. 18, 1994.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 02	159.46	FEB 16	159.69	APR 27	159.95	JUL 12	160.57
WATER YEAR 2001		HIGHEST	159.46	NOV 02, 2000	LOWEST	160.57	JUL 12, 2001



**GROUND-WATER LEVELS**  
**ISLE OF WIGHT COUNTY**

364814076440704. Local number, 57C 28 SOW 149D.

**LOCATION.**--Lat 36°48'15", long 76°44'06", NAD83, Hydrologic Unit 02080208, at Windsor Community Center in Windsor. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Middle Potomac aquifer of Cretaceous age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 807 ft, screened 797 to 807 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to Jul. 19, 1995, bimonthly measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 70 ft above sea level, from topographic map. Measuring point: Top of casing, 1.4 ft above land-surface datum.

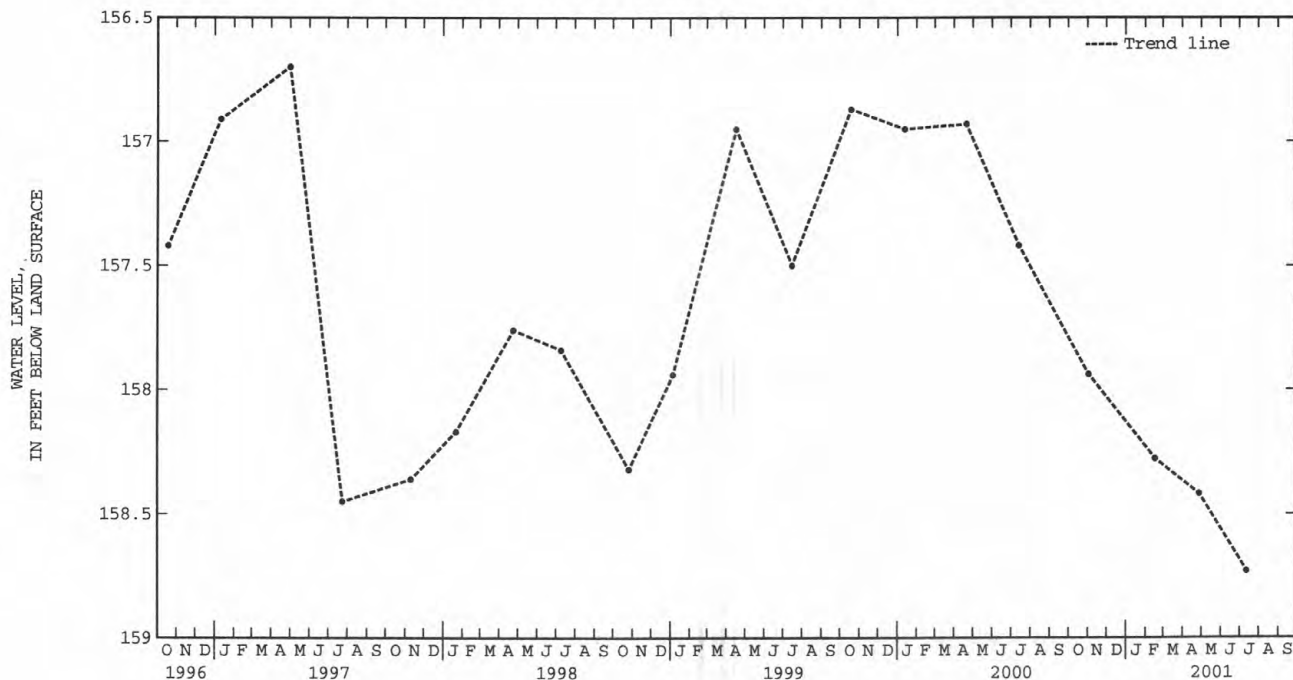
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage and regional drawdown.

**PERIOD OF RECORD.**--March 1985 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 142.80 ft below land-surface datum, Feb. 25, 1986; lowest measured, 165.62 ft below land-surface datum, Feb. 18, 1994.

**WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001**

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 02	157.94	FEB 16	158.28	APR 27	158.42	JUL 12	158.73
WATER YEAR 2001		HIGHEST	157.94	NOV 02, 2000		LOWEST	158.73
							JUL 12, 2001





## GROUND-WATER LEVELS

135

## ISLE OF WIGHT COUNTY

365751076433501. Local number, 57D 21 SOW 143A.

**LOCATION.**--Lat 36°57'52", long 76°43'34", NAD83, Hydrologic Unit 03010202, 50 ft west of State Highway 652, 0.5 mi south of State Highway 682, and 1.8 mi southwest of Magnet. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Middle Potomac aquifer of Cretaceous age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 650 ft, screened 640 to 650 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 7, 1985, to Jul. 10, 1995, bimonthly measurement with chalked tape. Prior to Oct. 7, 1985, monthly measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 73 ft above sea level, from topographic map. Measuring point: Top of casing, 1.0 ft above land-surface datum.

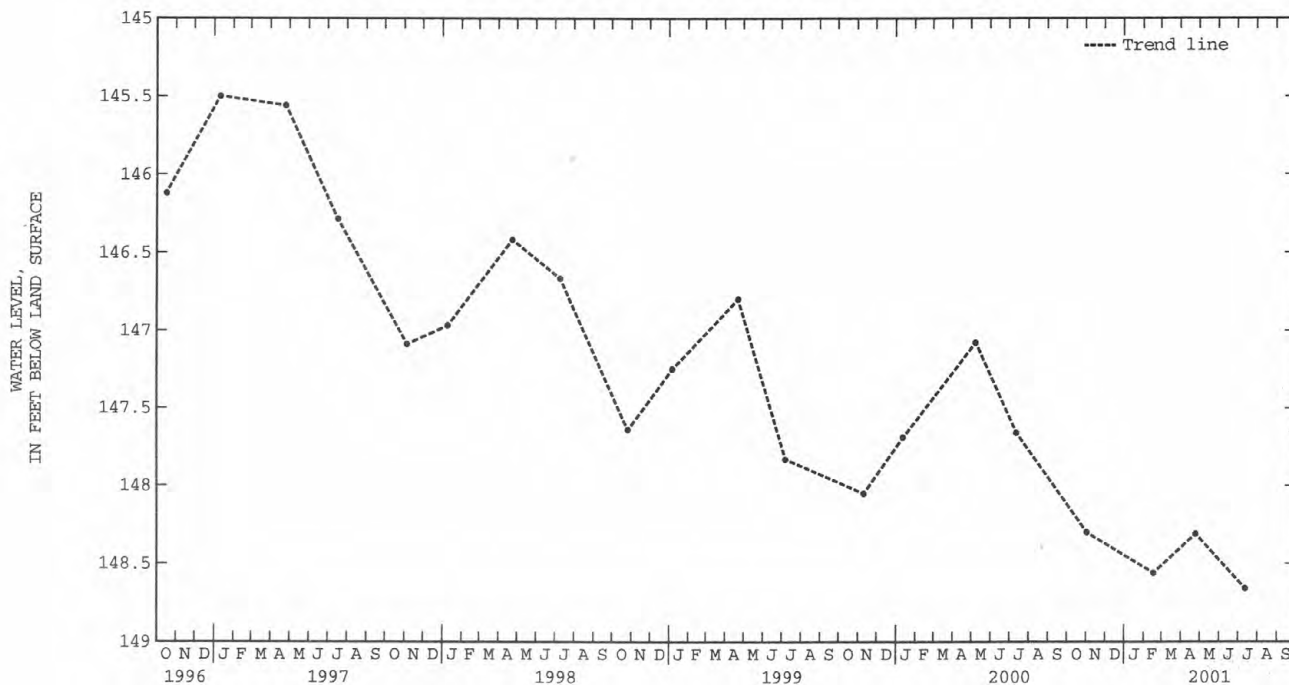
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

**PERIOD OF RECORD.**--April 1980 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 122.60 ft below land-surface datum, Aug. 27, 1980; lowest measured, 148.66 ft below land-surface datum, Jul. 12, 2001.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 01	148.30	FEB 16	148.56	APR 24	148.31	JUL 12	148.66
WATER YEAR 2001		HIGHEST 148.30		NOV 01, 2000		LOWEST 148.66 JUL 12, 2001	



## GROUND-WATER LEVELS

## ISLE OF WIGHT COUNTY

365751076433502. Local number, 57D 22 SOW 143B.

**LOCATION.**--Lat 36°57'52", long 76°43'34", NAD83, Hydrologic Unit 03010202, 50 ft west of State Highway 652, 0.5 mi south of State Highway 682, and 1.8 mi southwest of Magnet. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Brightseat-upper Potomac aquifer of Cretaceous-Paleocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 350 ft, screened 340 to 350 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 7, 1985, to Jul. 10, 1995, bimonthly measurement with chalked tape. Prior to Oct. 7, 1985, monthly measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 73 ft above sea level, from topographic map. Measuring point: Top of casing, 1.0 ft above land-surface datum.

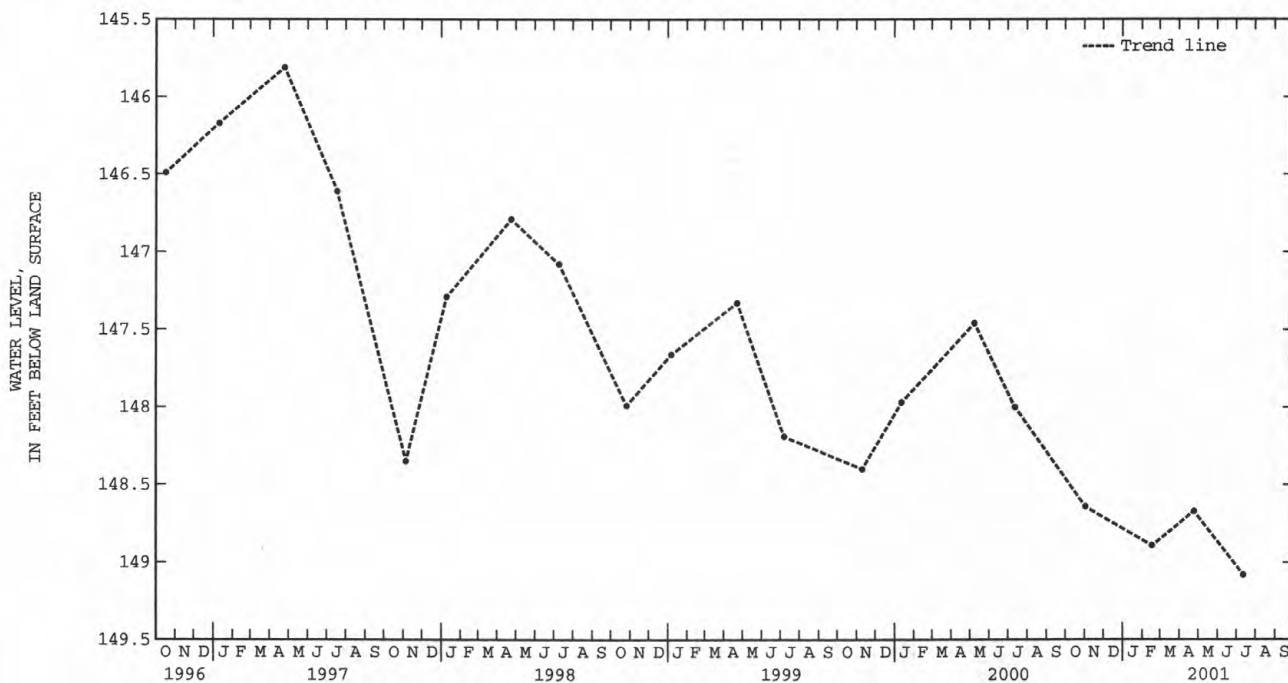
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

**PERIOD OF RECORD.**--April 1980 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 125.10 ft below land-surface datum, Apr. 24, May 29, 1980; lowest measured, 149.08 ft below land-surface datum, Jul. 12, 2001.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 01	148.64	FEB 16	148.89	APR 24	148.67	JUL 12	149.08
WATER YEAR 2001		HIGHEST	148.64	NOV 01, 2000		LOWEST	149.08



## GROUND-WATER LEVELS

137

## ISLE OF WIGHT COUNTY

365751076433503. Local number, 57D 23 SOW 143C.

**LOCATION.**--Lat 36°57'52", long 76°43'34", NAD83, Hydrologic Unit 03010202, 50 ft west of State Highway 652, 0.5 mi south of State Highway 682, and 1.8 mi southwest of Magnet. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Columbia aquifer of Quaternary age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 18 ft, screened 8 to 18 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 7, 1985, to Jul. 10, 1995, bimonthly measurement with chalked tape. Prior to Oct. 7, 1985, monthly measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 73 ft above sea level, from topographic map. Measuring point: Top of casing, 1.0 ft above land-surface datum.

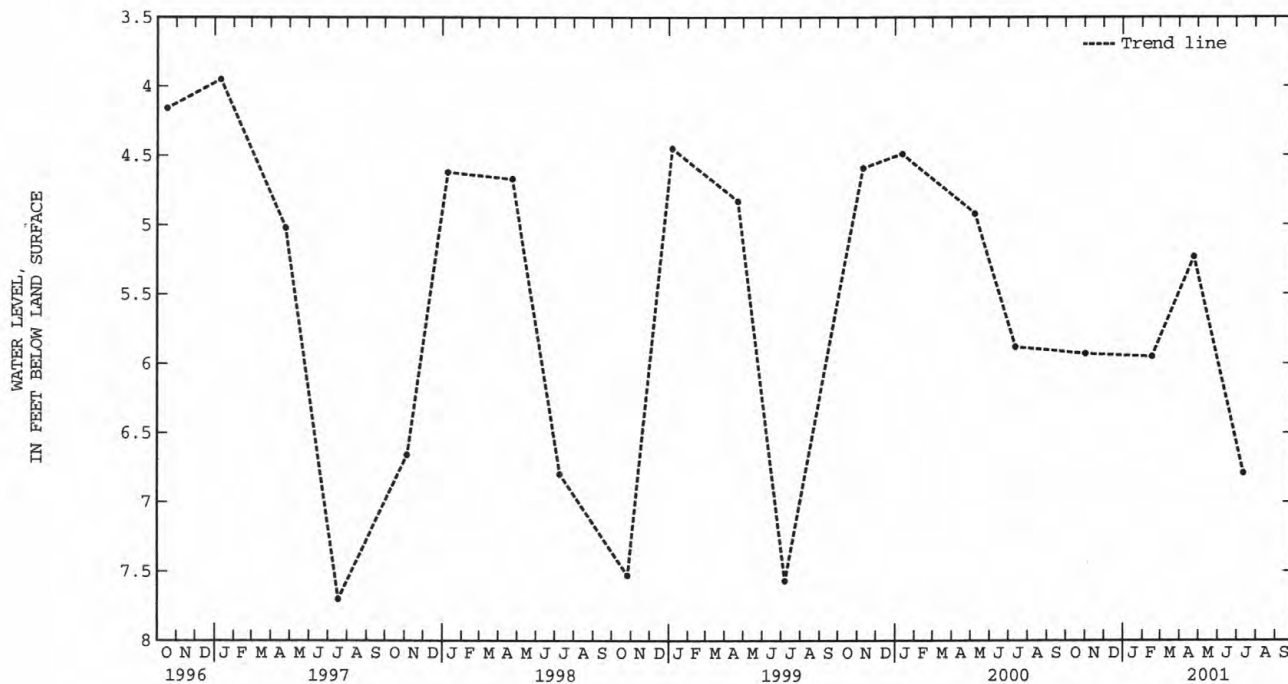
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division.

**PERIOD OF RECORD.**--April 1980 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 2.29 ft below land-surface datum, Feb. 23, 1987; lowest measured, 8.70 ft below land-surface datum, Aug. 11, 1986.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 01	5.93	FEB 16	5.95	APR 24	5.23	JUL 12	6.79
WATER YEAR 2001		HIGHEST	5.23	APR 24, 2001		LOWEST	6.79 JUL 12, 2001



## GROUND-WATER LEVELS

## ISLE OF WIGHT COUNTY

370236076425901. Local number, 57E 10 SOW 144B.

**LOCATION.**--Lat 37°02'54", long 76°43'11", NAD83, Hydrologic Unit 02080206, 0.5 mi east of State Highway 627, 1.0 mi north of State Highway 621, and 2.5 mi southwest of Rushmere. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Brightseat-upper Potomac aquifer of Cretaceous-Paleocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 440 ft, screened 430 to 440 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 7, 1985, to Jul. 10, 1995, bimonthly measurement with chalked tape. Prior to Oct. 7, 1985, monthly measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 85 ft above sea level, from topographic map. Measuring point: Top of casing, 1.5 ft above land-surface datum.

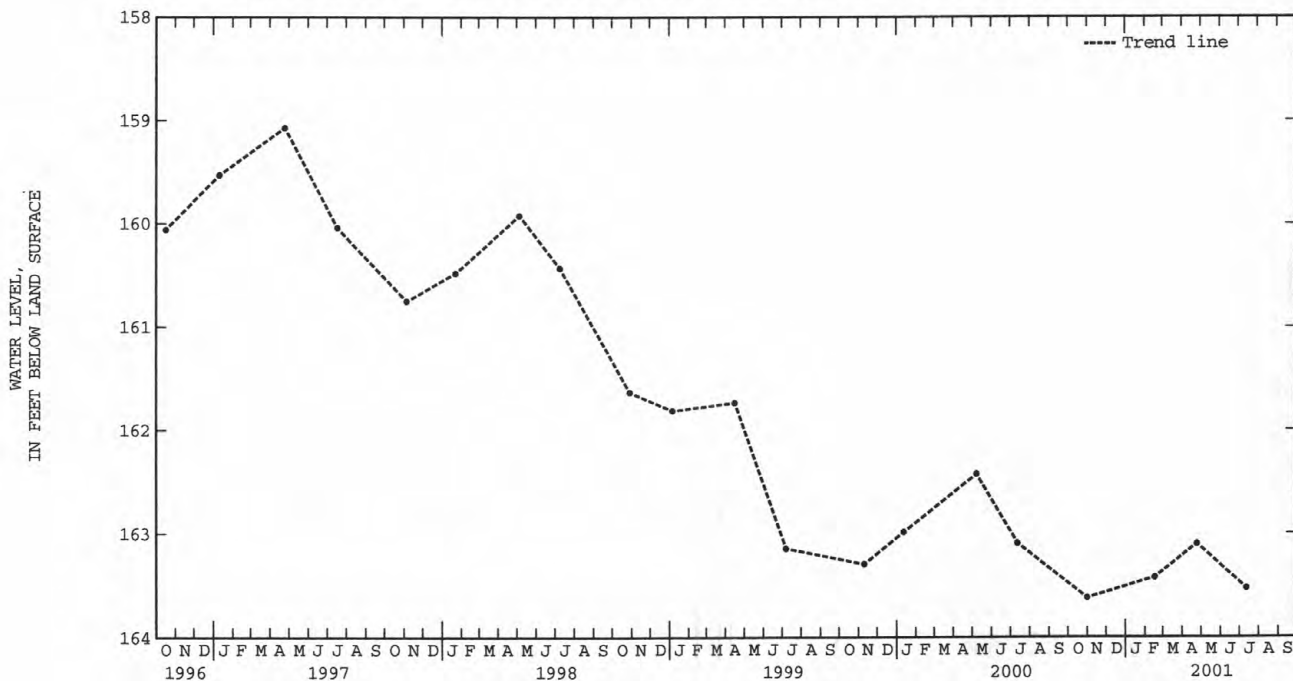
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage and regional drawdown.

**PERIOD OF RECORD.**--April 1980 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 139.90 ft below land-surface datum, Apr. 24, Jul. 24, 1980; lowest measured, 163.62 ft below land-surface datum, Oct. 31, 2000.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31	163.62	FEB 16	163.42	APR 24	163.10	JUL 12	163.53
WATER YEAR 2001		HIGHEST	163.10	APR 24, 2001		LOWEST	163.62
							OCT 31, 2000



## GROUND-WATER LEVELS

139

## ISLE OF WIGHT COUNTY

370253076431201. Local number, 57E 14 SOW 144A.

**LOCATION.**--Lat 37°02'54", long 76°43'11", NAD83, Hydrologic Unit 02080208, 0.5 mi east of State Highway 627, 1.0 mi north of State Highway 621, and 2.5 mi southwest of Rushmere. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Middle Potomac aquifer of Cretaceous age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in. to 590 ft, diameter 3 in. from 590 to 600 ft, depth 600 ft, screened 590 to 600 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 7, 1985, to Jul. 10, 1995, bimonthly measurement with chalked tape. Prior to Oct. 7, 1985, monthly measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 86 ft above sea level, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum.

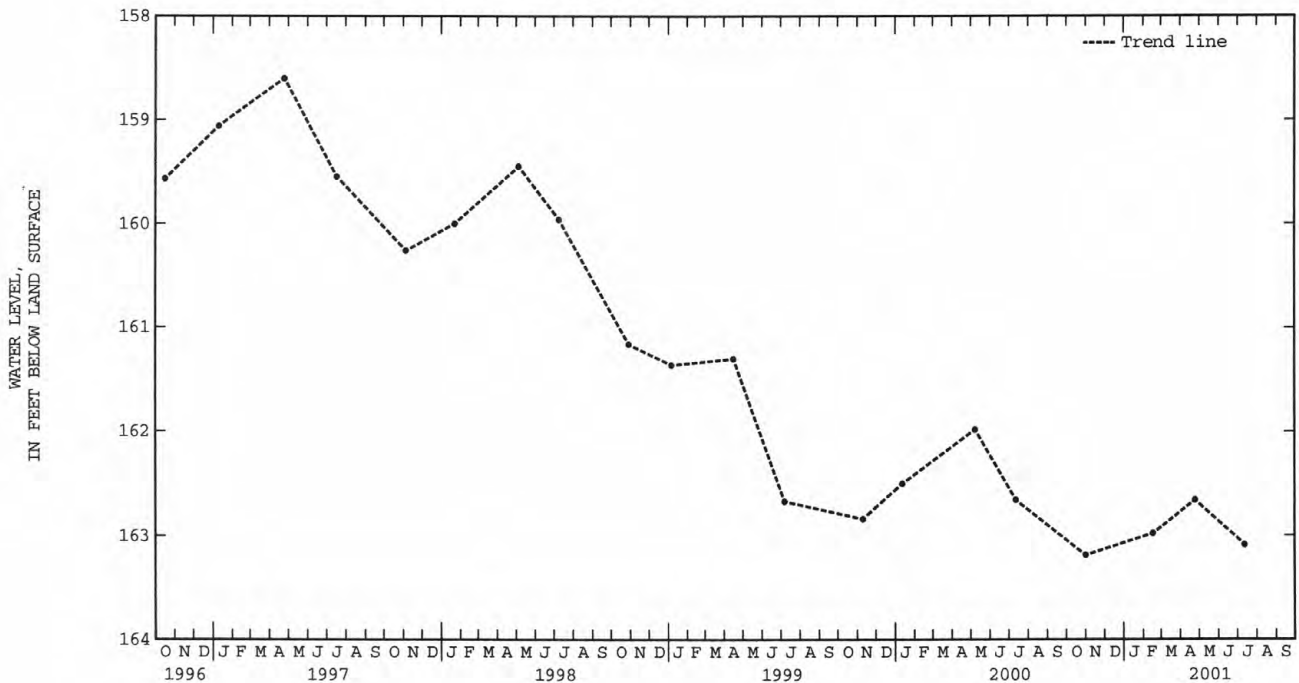
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage and regional drawdown.

**PERIOD OF RECORD.**--April 1980 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 139.49 ft below land-surface datum, Apr. 24, 1980; lowest measured, 163.19 ft below land-surface datum, Oct. 31, 2000.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31	163.19	FEB 16	162.98	APR 24	162.66	JUL 12	163.09
WATER YEAR 2001		HIGHEST	162.66	APR 24, 2001		LOWEST	163.19
							OCT 31, 2000



## GROUND-WATER LEVELS

## ISLE OF WIGHT COUNTY

370253076431202. Local number, 57E 15 SOW 144C.

**LOCATION.**--Lat 37°02'54", long 76°43'11", NAD83, Hydrologic Unit 02080208, 0.5 mi east of State Highway 627, 1.0 mi north of State Highway 621, and 2.5 mi southwest of Rushmere. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Columbia aquifer of Quaternary age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 20 ft, screened 10 to 20 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 7, 1985, to Jul. 10, 1995, bimonthly measurement with chalked tape. Prior to Oct. 7, 1985, monthly measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 86 ft above sea level, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum.

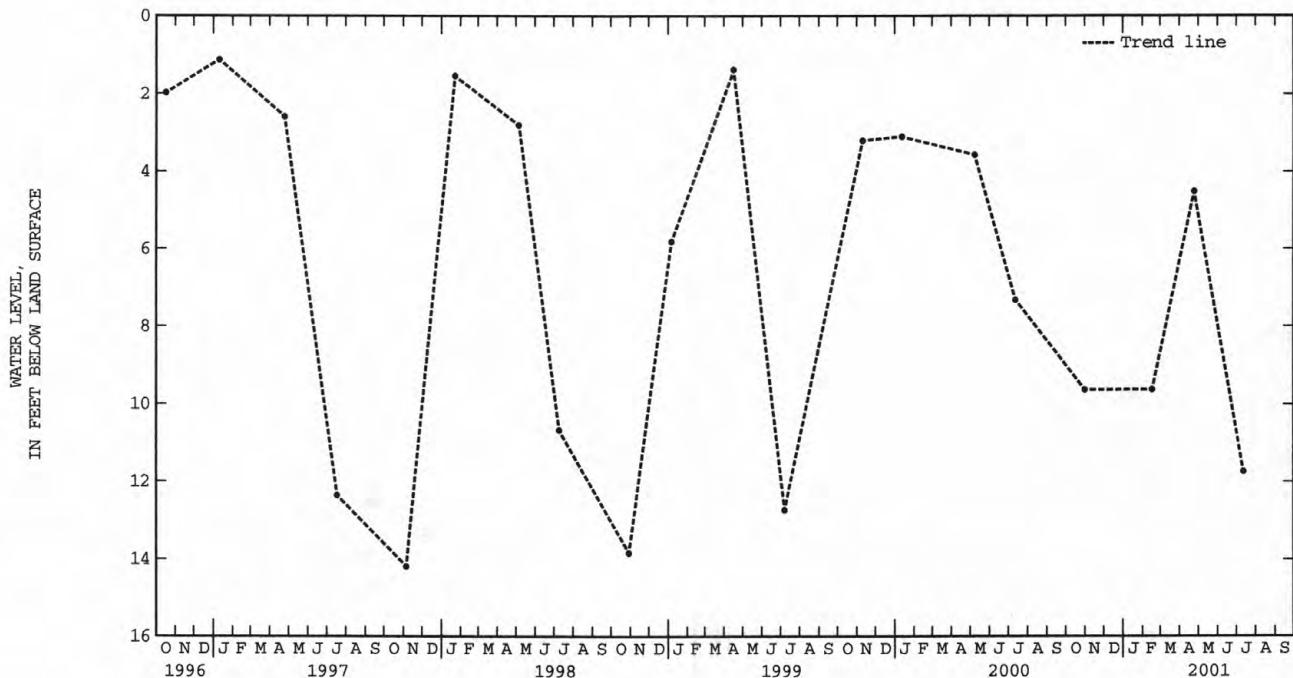
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division.

**PERIOD OF RECORD.**--April 1980 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 0.88 ft below land-surface datum, Feb. 17, 1994; lowest measured, 14.23 ft below land-surface datum, Nov. 3, 1994.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31	9.64	FEB 16	9.63	APR 24	4.52	JUL 12	11.74
WATER YEAR 2001		HIGHEST	4.52	APR 24, 2001	LOWEST	11.74	JUL 12, 2001





## 141

372546076532901. Local number, 55H 20.

**AQUIFER.**--Lower and middle Potomac aquifers of Cretaceous age.

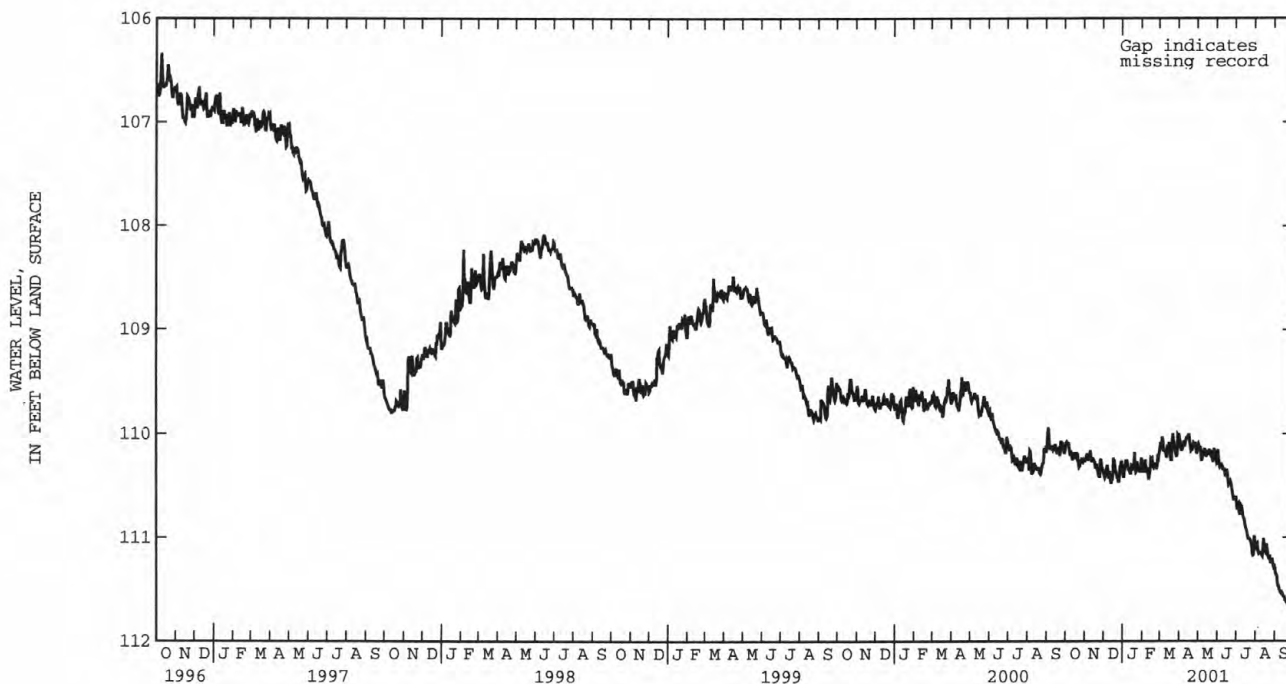
**INSTRUMENTATION.**--Electronic data logger 60-minute record interval. Prior to Nov. 4, 1999, digital recorder 60-minute punch.

**REMARKS.**--Missing record due to recorder malfunction. Water level affected by regional drawdown.

**PERIOD OF RECORD.**--May 1988 to current year.

**EXTREMES FOR CURRENT YEAR.**--Highest instantaneous water level, 109.75 ft below land-surface datum, Mar. 21; lowest instantaneous water level, 111.75 ft below land-surface datum, Sep. 29, 2001.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	110.10	110.19	110.35	110.31	110.30	110.03	110.16	110.13	110.32	110.67	111.13	111.44
10	110.17	110.16	110.42	110.34	110.35	110.18	110.12	110.17	110.34	110.70	111.16	111.53
15	110.19	110.25	110.44	110.31	110.24	110.15	110.02	110.20	110.39	110.87	111.07	111.57
20	110.23	110.29	110.35	110.18	110.28	110.25	110.16	110.19	110.48	111.01	111.11	111.63
25	110.27	110.41	110.46	110.32	110.31	110.13	110.10	110.27	110.56	111.05	111.24	111.60
BOM	110.26	110.36	110.32	110.23	110.19	110.02	110.17	110.28	110.61	111.04	111.26	111.70



## GROUND-WATER LEVELS

## JAMES CITY COUNTY

371311076463601. Local number, 56F 1 SOW 018.

**LOCATION.**--Lat 37°13'12", long 76°46'35", NAD83, Hydrologic Unit 02080206, 1,100 ft southwest of Colonial Parkway, 0.5 mi west of State Highway 682, and 0.6 mi north of Jamestown. Owner: U.S. Department of Interior, Colonial National Historical Park.

**AQUIFER.**--Brightseat-upper Potomac aquifer of Cretaceous-Paleocene age.

**WELL CHARACTERISTICS.**--Drilled unused water well, diameter 4 in., depth 346 ft, screened 336 to 346 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to Jul. 7, 1995, bimonthly measurement with chalked tape. Sep. 30, 1980, to Sep. 30, 1985, occasional measurement with chalked tape. Prior to Sep. 30, 1980, continuous strip-chart recorder.

**DATUM.**--Elevation of land-surface datum is 10 ft above sea level, from topographic map. Measuring point: Top edge of recorder shelf, 3.15 ft above land-surface datum.

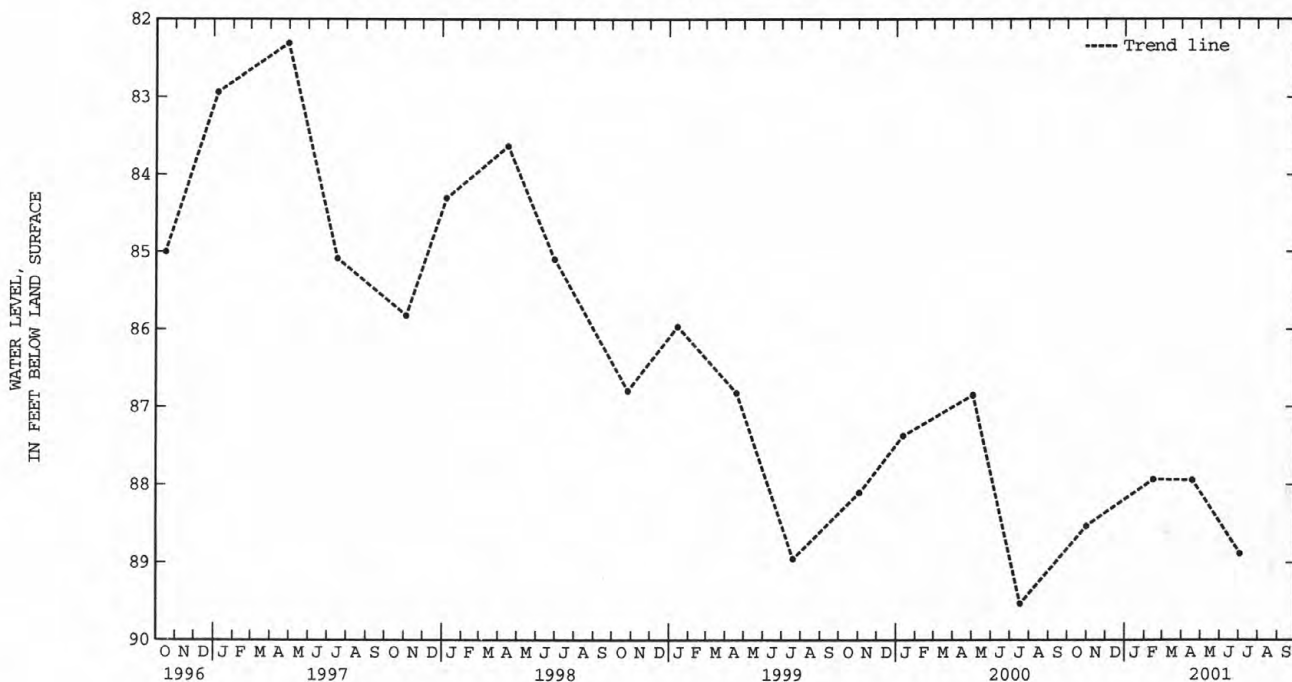
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

**PERIOD OF RECORD.**--May 1969 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 43.29 ft below land-surface datum, May 8, 1969; lowest measured, 89.53 ft below land-surface datum, Jul. 17, 2000.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31	88.53	FEB 15	87.93	APR 18	87.94	JUL 03	88.88
WATER YEAR 2001		HIGHEST	87.93	FEB 15, 2001		LOWEST	88.88 JUL 03, 2001



## GROUND-WATER LEVELS

143

## JAMES CITY COUNTY

372145076493201. Local number, 56G 57.

**LOCATION.**--Lat 37°21'46", long 76°49'31", NAD83, Hydrologic Unit 02080206, 1.75 mi south of the intersection of U.S. Highway 60 and State Highway 631 (Church Lane), off a dirt road at the end of State Highway 631, and 0.10 mi north of the pump station at Little Creek Reservoir. Owner: City of Newport News.

**AQUIFER.**--Middle Potomac aquifer of Cretaceous age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 12 in. to 300 ft, diameter 6 in. from 300 to 695 ft, depth 695 ft, screened 530 to 540 ft, 558 to 598 ft, 604 to 624 ft, 660 to 690 ft.

**INSTRUMENTATION.**--Electronic data logger 60-minute record interval. Prior to Nov. 4, 1999, digital recorder 60-minute punch.

**DATUM.**--Elevation of land-surface datum is 84 ft above sea level, from topographic map. Measuring point: Top of casing, 4.3 ft above land-surface datum.

**REMARKS.**--Missing record due to recorder malfunction. Water level affected by regional drawdown.

**PERIOD OF RECORD.**--May 1988 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level recorded, 155.79 ft below land-surface datum, May 25, 1988; lowest recorded, 176.67 ft below land-surface datum, Sep. 29, 2001.

**EXTREMES FOR CURRENT YEAR.**--Highest instantaneous water level, 173.72 ft below land-surface datum, Mar. 6; lowest instantaneous water level, 176.67 ft below land-surface datum, Sep. 29.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	174.16	173.93	174.26	174.47	174.19	173.87	174.14	174.79	175.31	176.38	176.00	176.21
10	174.37	174.01	174.32	174.42	174.20	174.00	174.18	174.87	175.31	176.03	176.52	176.30
15	174.39	174.25	174.50	174.37	174.12	173.98	173.90	175.01	175.31	176.49	176.31	176.41
20	174.50	174.21	174.37	174.13	174.10	174.21	174.09	174.98	175.58	176.56	176.27	176.54
25	174.57	174.34	174.53	174.20	174.14	174.13	174.27	174.93	175.97	176.42	176.22	176.55
EOM	174.41	174.15	174.39	174.13	174.06	174.04	174.51	175.21	176.29	175.83	176.12	176.66



## GROUND-WATER LEVELS

## JAMES CITY COUNTY

372314076480401. Local number, 56H 22 SOW 135A.

**LOCATION.**--Lat 37°23'14", long 76°48'05", NAD83, Hydrologic Unit 02080107, 100 ft south of State Highway 754, 0.2 mi east of intersection of U.S. Highway 60 and State Highway 754, and 0.5 mi north of Toano. Owner: James City Service Authority.

**AQUIFER.**--Middle Potomac aquifer of Cretaceous age.

**WELL CHARACTERISTICS.**--Drilled unused water well, diameter 2 in., depth 645 ft, screened 625 to 645 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sep. 30, 1985, to Jul. 10, 1995, bimonthly measurement with chalked tape. Prior to Sep. 30, 1985, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 105 ft above sea level, from topographic map. Measuring point: Top of casing, 0.50 ft above land-surface datum prior to Mar. 3, 1988; at land-surface datum Mar. 3, 1988, to Mar. 1, 1989; 0.50 ft below land-surface datum prior to May 5, 1997; 0.85 ft below land surface datum thereafter.

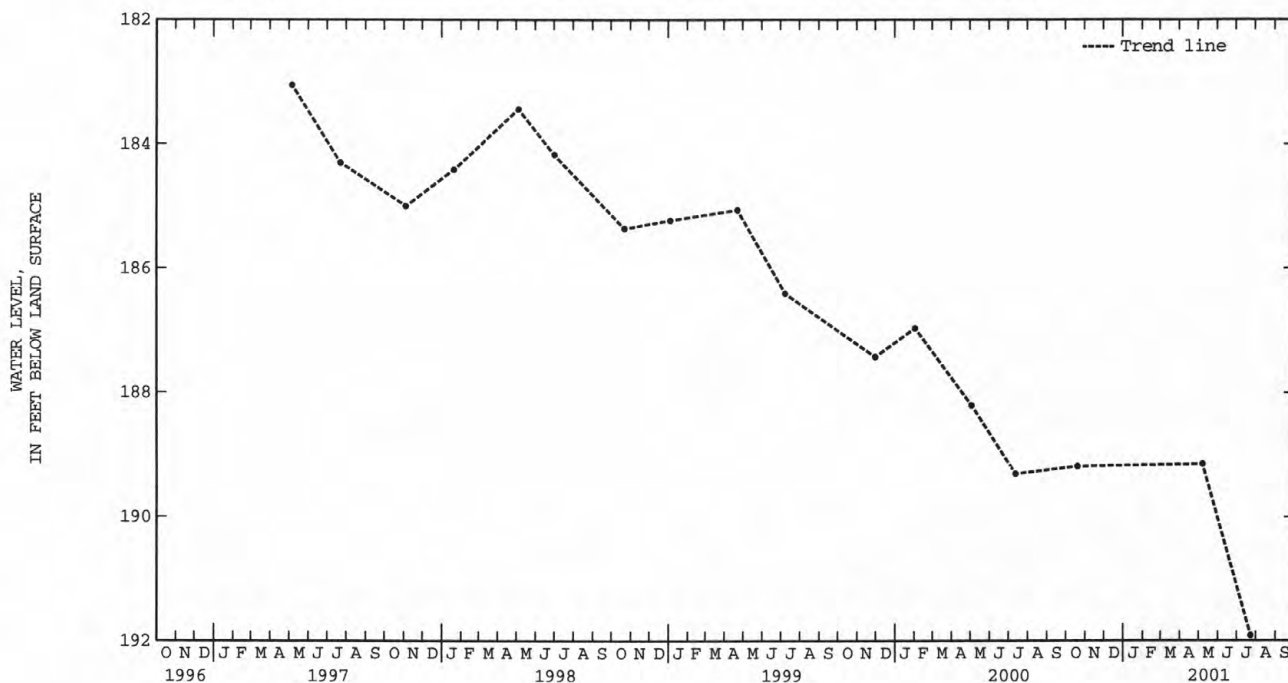
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown and occasional local pumpage.

**PERIOD OF RECORD.**--March 1979 to October 1995, May 1997 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 154.85 ft below land-surface datum, Apr. 5, 1979; lowest measured, 191.92 ft below land-surface datum, Jul. 23, 2001.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 19	189.19	MAY 07	189.15	JUL 23	191.92
WATER YEAR 2001		HIGHEST 189.15 MAY 07, 2001		LOWEST 191.92 JUL 23, 2001	



## 145

## JAMES CITY COUNTY

**LOCATION.**--Lat 37°24'52", long 76°51'32", NAD83, Hydrologic Unit 02080206, on the northwest side of State Highway 601 in James City County, 0.7 mi north of the intersection of State Highways 168 and 601, and 3.15 mi west of the intersection of U.S. Highway 60 and State Highway 168. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Lower Potomac aquifer of Cretaceous age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 929 ft, screened 888 to 908 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sep. 28, 1995 to Sep. 30, 1999, occasional measurement with chalked tape by USGS personnel. Sep. 25, 1991 to Sep. 28, 1995, monthly measurement with chalked tape. Apr. 20, 1988 to Sep. 25, 1991, occasional measurement with chalked tape. Prior to Apr. 20, 1988, digital recorder 60-minute punch.

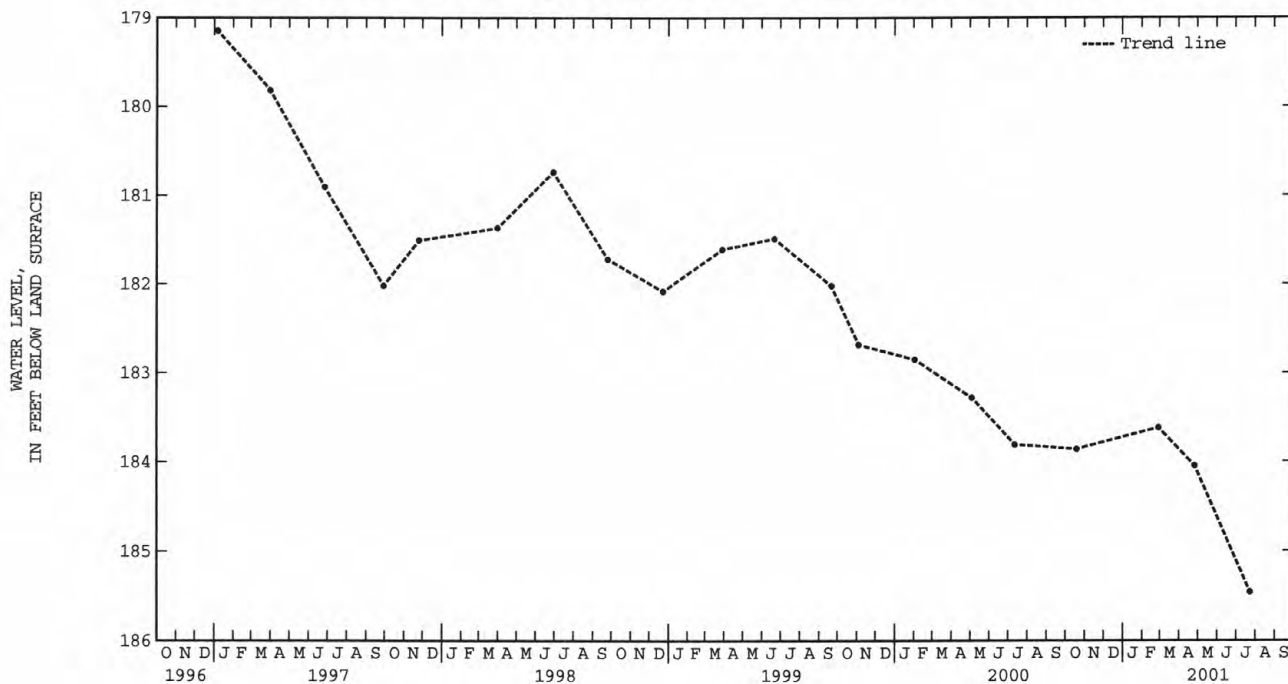
**DATUM.**--Elevation of land-surface datum is 103 ft above sea level, from topographic map. Measuring point: Top of casing, 2.15 ft above land-surface datum prior to Mar. 31, 1994; 1.00 ft thereafter.

**REMARKS.**--Records provided by Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown. Water from this well is known to contain concentrations of dissolved solids greater than 1,000 mg/L.

**PERIOD OF RECORD.**--April 1985 to current year. Unpublished records available prior to October 1986 in files of the Geological Survey.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level recorded, 158.21 ft below land-surface datum, Mar. 19, 20, 1986; lowest measured, 185.46 ft below land-surface datum, Jul. 23, 2001.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 19	183.86	FEB 27	183.62	APR 26	184.05	JUL 23	185.46
WATER YEAR 2001		HIGHEST	183.62	FEB 27, 2001		LOWEST	185.46 JUL 23, 2001



## GROUND-WATER LEVELS

## JAMES CITY COUNTY

372506076511702. Local number, 56H 26 SOW 177B.

**LOCATION.**--Lat 37°24'52", long 76°51'32", NAD83, Hydrologic Unit 02080206, on the northwest side of State Highway 601 in James City County, 0.7 mi north of the intersection of State Highways 168 and 601, and 3.15 mi west of the intersection of U.S. Highway 60 and State Highway 168. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Middle Potomac aquifer of Cretaceous age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 581 ft, screened 550 to 560 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sep. 28, 1995 to Sep. 30, 1999, occasional measurement with chalked tape by USGS personnel. Sep. 25, 1991 to Sep. 28, 1995, monthly measurement with chalked tape. Prior to Sep. 25, 1991, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 103 ft above sea level, from topographic map. Measuring point: Top of casing, 2.15 ft above land-surface datum prior to Mar. 31, 1994; 0.65 ft thereafter.

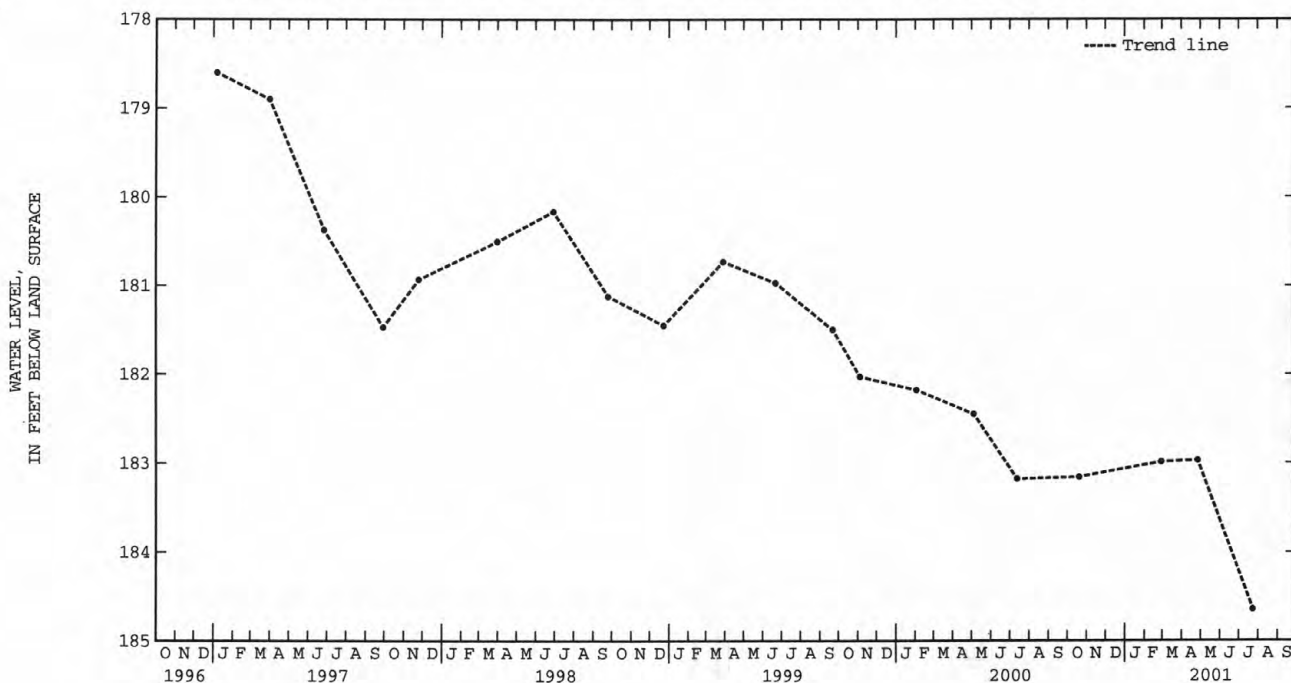
**REMARKS.**--Records provided by Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

**PERIOD OF RECORD.**--April 1985 to current year. Unpublished records prior to October 1986 and fragmentary periods of continuous record for water years 1985-89 available in files of the Geological Survey.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level recorded, 157.61 ft below land-surface datum, Jun. 1, 2, 1985; lowest measured, 184.65 ft below land-surface datum, Jul. 23, 2001.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 19	183.16	FEB 27	182.99	APR 26	182.97	JUL 23	184.65
WATER YEAR 2001		HIGHEST	182.97	APR 26, 2001		LOWEST	184.65
							JUL 23, 2001





## GROUND-WATER LEVELS

147

## JAMES CITY COUNTY

372506076511703. Local number, 56H 27 SOW 177C.

**LOCATION.**--Lat 37°24'52", long 76°51'32", NAD83, Hydrologic Unit 02080206, on the northwest side of State Highway 601 in James City County, 0.7 mi north of the intersection of State Highways 168 and 601, and 3.15 mi west of the intersection of U.S. Highway 60 and State Highway 168. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Brightseat-upper Potomac aquifer of Cretaceous-Paleocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 401 ft, screened 370 to 380 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Aug. 26, 1993 to Sep. 30, 1999, monthly measurement with chalked tape by USGS personnel. Prior to Aug. 26, 1993, digital recorder 60-minute punch.

**DATUM.**--Elevation of land-surface datum is 103 ft above sea level, from topographic map. Measuring point: Top of casing, 2.95 ft above land-surface datum prior to Mar. 31, 1994; 1.35 ft thereafter.

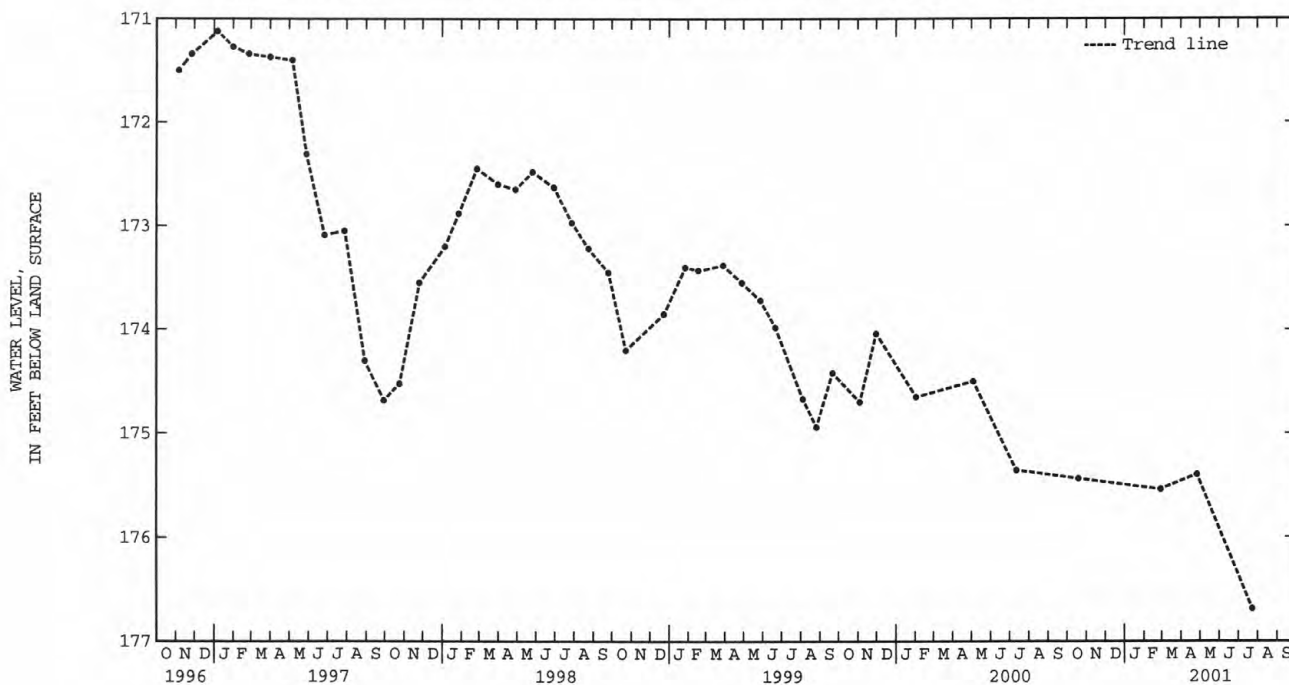
**REMARKS.**--Records provided by Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

**PERIOD OF RECORD.**--April 1985 to current year. Unpublished records available prior to October 1986 in files of the Geological Survey.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level recorded, 153.47 ft below land-surface datum, Jun. 1, 2, 1985; lowest measured, 176.69 ft below land-surface datum, Jul. 23, 2001.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 19	175.44	FEB 27	175.54	APR 26	175.40	JUL 23	176.69
WATER YEAR 2001		HIGHEST 175.40		APR 26, 2001		LOWEST 176.69 JUL 23, 2001	



## GROUND-WATER LEVELS

## JAMES CITY COUNTY

372506076511704. Local number, 56H 28 SOW 177D.

**LOCATION.**--Lat 37°24'52", long 76°51'32", NAD83, Hydrologic Unit 02080206, 3.15 mi west of the intersection of U.S. Highway 60 and State Highway 168, 0.7 mi north of the intersection of State Highways 168 and 601, and on the northwest side of State Highway 601 in James City County. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Aquia aquifer of Paleocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 321 ft, screened 290 to 300 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sep. 28, 1995 to Sep. 30, 1999, occasional measurement with chalked tape by USGS personnel. Sep. 25, 1991 to Sep. 28, 1995, monthly measurement with chalked tape. Sep. 16, 1989 to Sep. 25, 1991, occasional measurement with chalked tape. Prior to Sep. 16, 1989, digital recorder 60-minute punch.

**DATUM.**--Elevation of land-surface datum is 103 ft above sea level, from topographic map. Measuring point: Top of casing, 2.9 ft above land-surface datum prior to Dec. 4, 1989; 0.9 ft thereafter.

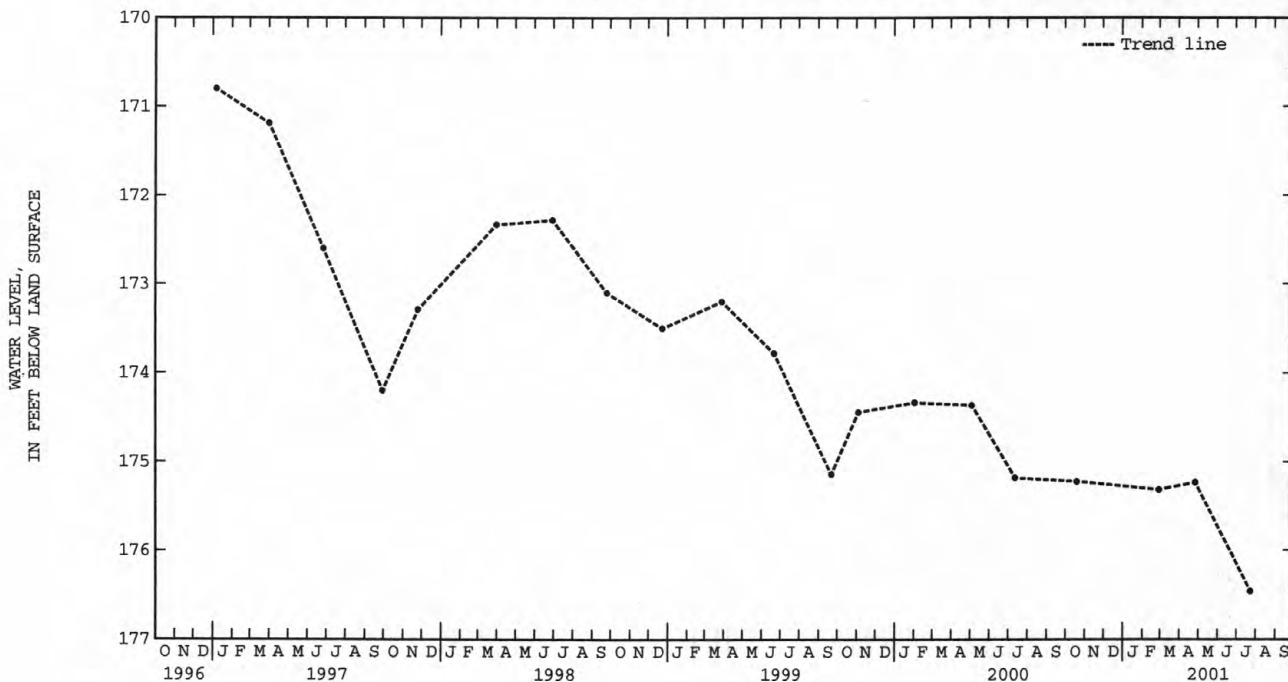
**REMARKS.**--Records provided by Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

**PERIOD OF RECORD.**--April 1985 to current year. Unpublished records available prior to October 1986 in files of the Geological Survey.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level recorded, 153.20 ft below land-surface datum, May 31, 1985; lowest measured, 176.46 ft below land-surface datum, Jul. 23, 2001.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 19	175.22	FEB 27	175.31	APR 26	175.23	JUL 23	176.46
WATER YEAR 2001		HIGHEST	175.22	OCT 19, 2000	LOWEST	176.46	JUL 23, 2001



## GROUND-WATER LEVELS

149

## JAMES CITY COUNTY

372506076511705. Local number, 56H 29 SOW 177E.

**LOCATION.**--Lat 37°24'52", long 76°51'32", NAD83, Hydrologic Unit 02080206, on the northwest side of State Highway 601 in James City County, 0.7 mi north of the intersection of State Highways 168 and 601, and 3.15 mi west of the intersection of U.S. Highway 60 and State Highway 168. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Chickahominy-Piney Point aquifer of Eocene-Oligocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 235 ft, screened 204 to 214 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sep. 28, 1995 to Sep. 30, 1999, occasional measurement with chalked tape by USGS personnel. Sep. 25, 1991 to Sep. 28, 1995, monthly measurement with chalked tape. Sep. 21, 1989 to Sep. 25, 1991, occasional measurement with chalked tape. Prior to Sep. 21, 1989, digital recorder 60-minute punch.

**DATUM.**--Elevation of land-surface datum is 103 ft above sea level, from topographic map. Measuring point: Top of casing, 2.8 ft above land-surface datum prior to Dec. 4, 1989; 0.75 ft thereafter.

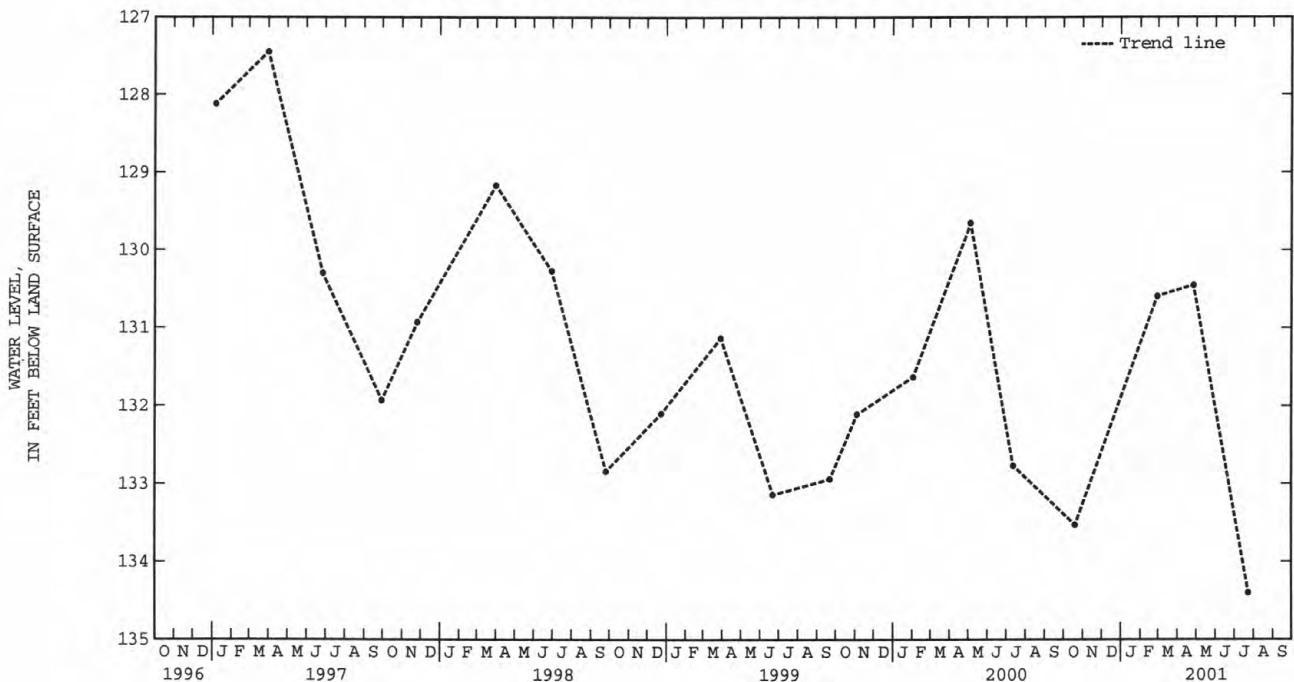
**REMARKS.**--Records provided by Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

**PERIOD OF RECORD.**--April 1985 to current year. Unpublished records available prior to October 1986 in files of the Geological Survey.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level recorded, 111.96 ft below land-surface datum, Feb. 27, 1986; lowest measured, 134.40 ft below land-surface datum, Jul. 23, 2001.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 19	133.53	FEB 27	130.59	APR 26	130.45	JUL 23	134.40
WATER YEAR 2001		HIGHEST	130.45	APR 26, 2001		LOWEST	134.40
							JUL 23, 2001



## GROUND-WATER LEVELS

## JAMES CITY COUNTY

372506076511706. Local number, 56H 30 SOW 177F.

**LOCATION.**--Lat 37°24'52", long 76°51'32", NAD83, Hydrologic Unit 02080206, on the northwest side of State Highway 601 in James City County, 0.7 mi north of the intersection of State Highways 168 and 601, and 3.15 mi west of the intersection of U.S. Highway 60 and State Highway 168. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Yorktown-Eastover aquifer of Miocene-Pliocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 60 ft, screened 50 to 60 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sep. 28, 1995 to Sep. 30, 1999, occasional measurement with chalked tape by USGS personnel. Sep. 25, 1991 to Sep. 28, 1995, monthly measurement with chalked tape. Sep. 20, 1989 to Sep. 25, 1991, occasional measurement with chalked tape. Prior to Sep. 20, 1989, digital recorder 60-minute punch.

**DATUM.**--Elevation of land-surface datum is 103 ft above sea level, from topographic map. Measuring point: Top of casing, 2.9 ft above land-surface datum prior to Dec. 4, 1989; 1.1 ft thereafter.

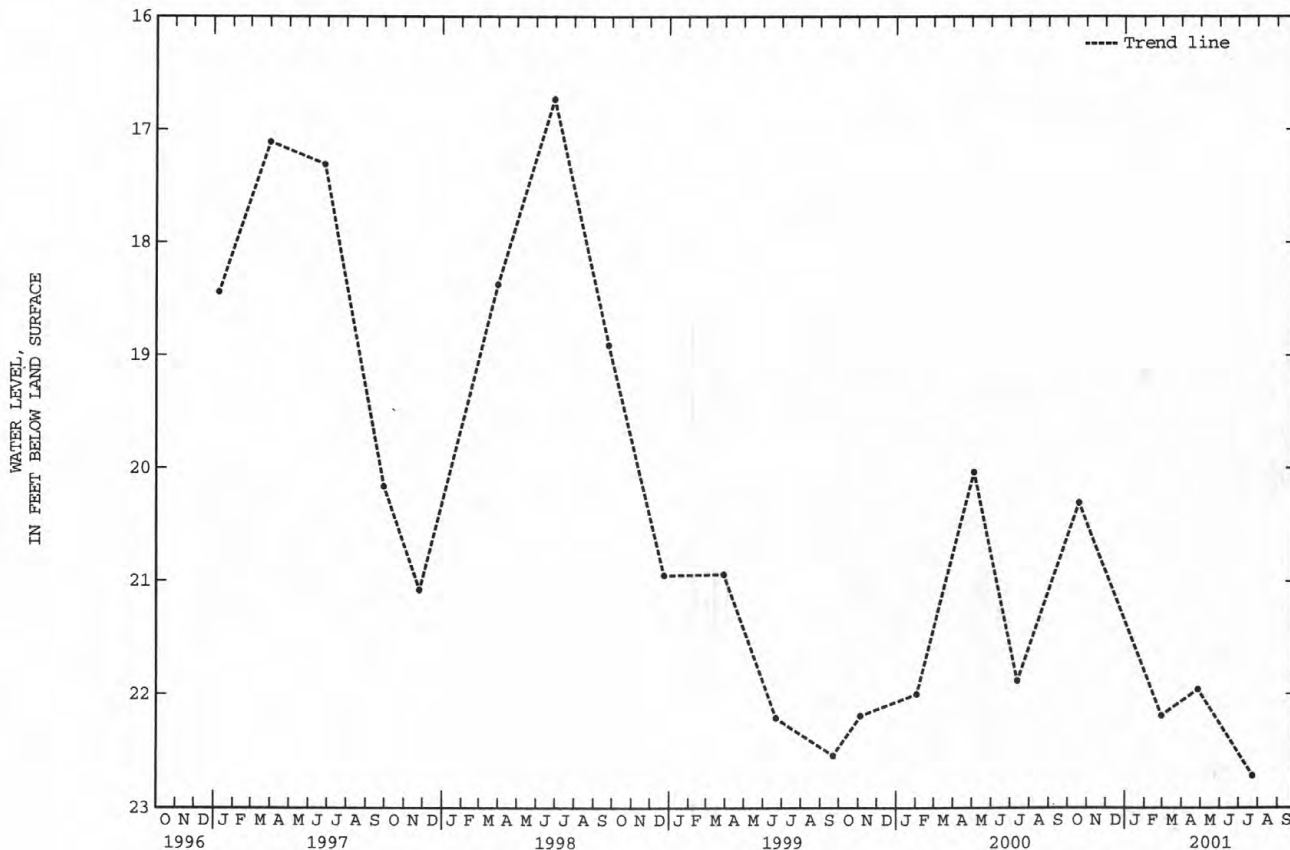
**REMARKS.**--Records provided by Virginia Department of Environmental Quality - Water Division.

**PERIOD OF RECORD.**--April 1985 to current year. Unpublished records available prior to October 1986 in files of the Geological Survey.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 16.73 ft below land-surface datum, Jun. 29, 1998; lowest measured, 24.45 ft below land-surface datum, Feb. 28, 1992.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 19	20.30	FEB 27	22.19	APR 26	21.96	JUL 23	22.72
WATER YEAR 2001		HIGHEST	20.30	OCT 19, 2000	LOWEST	22.72	JUL 23, 2001



## GROUND-WATER LEVELS

151

## JAMES CITY COUNTY

372314076480402. Local number, 56H 31 SOW 135B.

**LOCATION.**--Lat 37°23'14", long 76°48'05", NAD83, Hydrologic Unit 02080107, 100 ft south of State Highway 754, 0.2 mi east of intersection of State Highway 754 and U.S. Highway 60, and 0.5 mi north of Toano. Owner: James City Service Authority.

**AQUIFER.**--Columbia aquifer of Quaternary age.

**WELL CHARACTERISTICS.**--Drilled unused water well, diameter 4 in., depth 30 ft, screened 20 to 30 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sep. 30, 1985, to Jul. 10, 1995, bimonthly measurement with chalked tape. Prior to Sep. 30, 1985, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 95 ft above sea level, from topographic map. Measuring point: Top of casing, 0.3 ft above land-surface datum prior to Mar. 3, 1988; at land-surface datum Mar. 3, 1988, to Mar. 1, 1989; 0.2 ft below land-surface datum prior to May 5, 1997; 0.95 ft below land surface datum thereafter.

**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division.

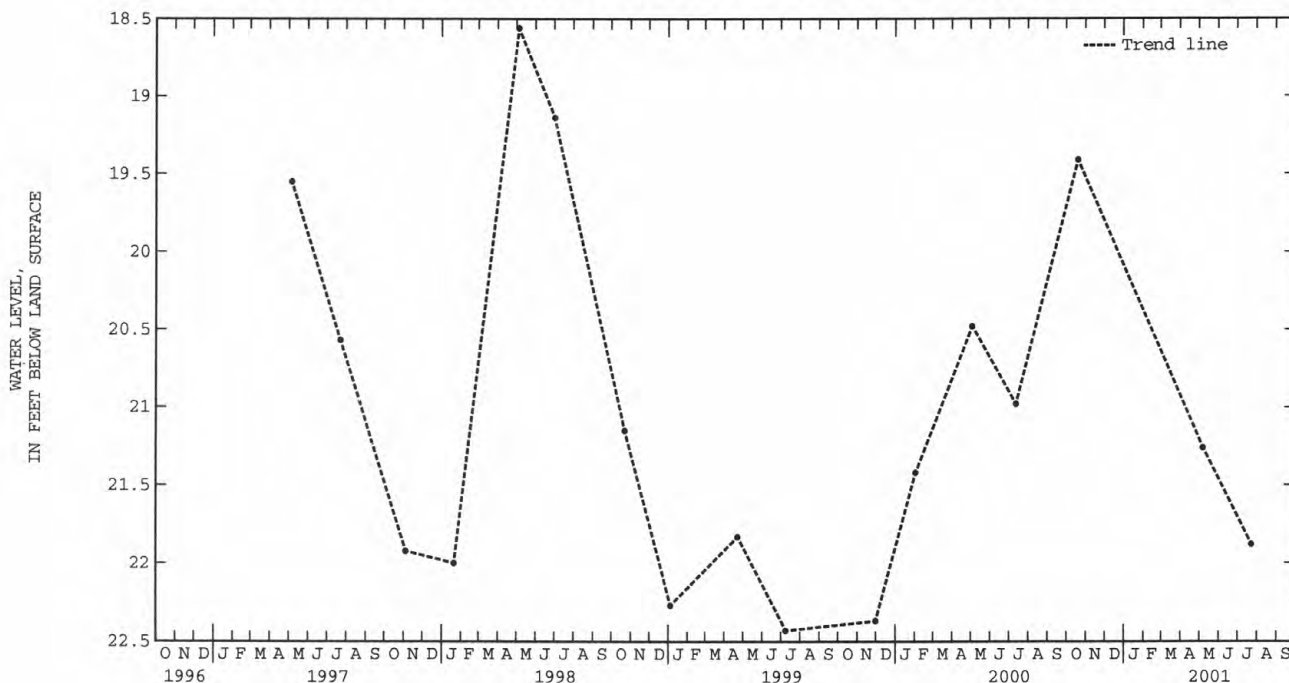
**PERIOD OF RECORD.**--August 1979 to October 1995, May 1997 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 16.28 ft below land-surface datum, June 8, 1984; lowest measured, 23.80 ft below land-surface datum, Mar. 1, 1989.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 19	19.41	MAY 07	21.26	JUL 23	21.88

WATER YEAR 2001	HIGHEST	19.41	OCT 19, 2000	LOWEST	21.88	JUL 23, 2001
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## GROUND-WATER LEVELS

## JAMES CITY COUNTY

372315076415001. Local number 57H 14 SOW 095.

**LOCATION.**--Lat 37°23'16", long 76°41'49", NAD83, Hydrologic Unit 02080107, 500 ft north of State Highway 606, 0.8 mi east of intersection of State Highway 606 and 646, and 3.3 mi east of Croaker. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Yorktown-Eastover aquifer of Miocene-Pliocene age.

**WELL CHARACTERISTICS.**--Drilled unused water well, diameter 4 in., depth 123 ft, screened 118 to 123 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sep. 30, 1985, to Jul. 10, 1995, bimonthly measurement with chalked tape. Prior to Sep. 30, 1985, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 95 ft above sea level, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum prior to Mar. 3, 1988; 1.4 ft thereafter.

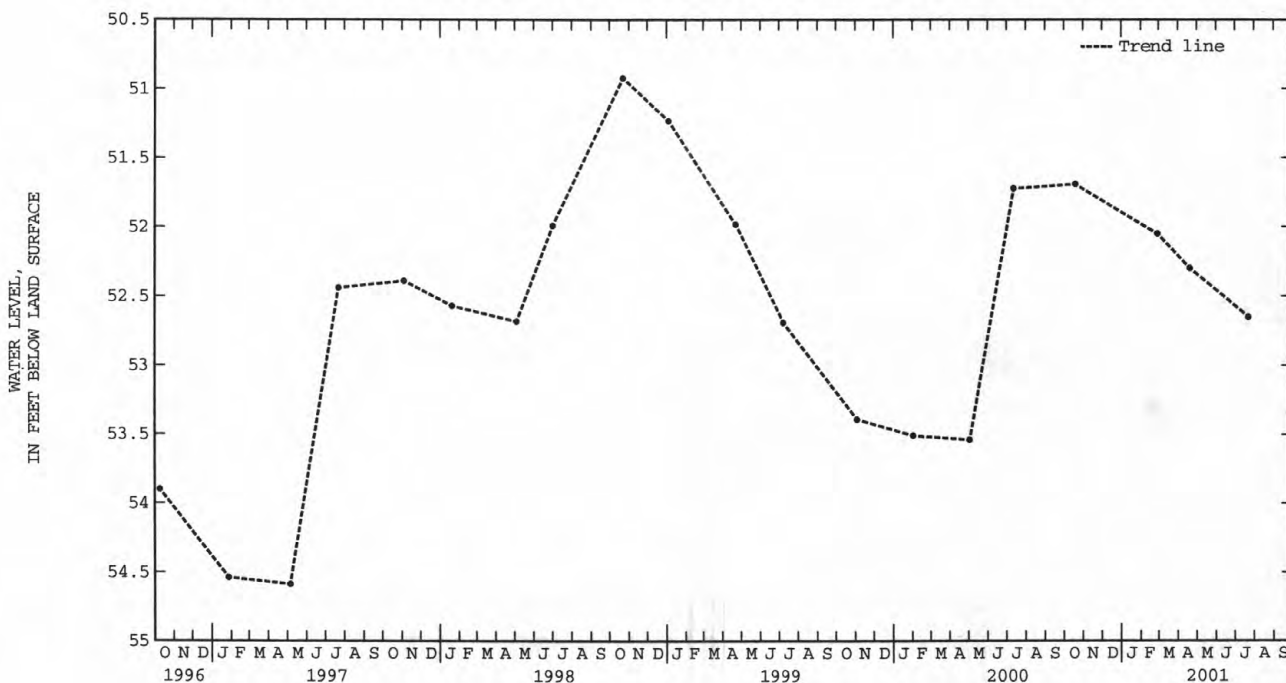
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

**PERIOD OF RECORD.**--September 1978 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 45.00 ft below land-surface datum, Sep. 21, 1978; lowest measured, 54.64 ft below land-surface datum, Apr. 19, 1993.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 19	51.69	FEB 27	52.05	APR 20	52.30	JUL 23	52.65
WATER YEAR 2001		HIGHEST	51.69	OCT 19, 2000	LOWEST	52.65	JUL 23, 2001





## GROUND-WATER LEVELS

153

## KING AND QUEEN COUNTY

374328077012801. Local number, 54K 6 SOW 064.

**LOCATION.**--Lat 37°43'29", long 77°01'27", NAD83, Hydrologic Unit 02080105, 100 ft west of State Highway 629, 0.2 mi southeast of Walkerton, and 0.25 mi south of intersection of State Highways 629 and 634. Owner: C. L. Walker.

**AQUIFER.**--Middle Potomac aquifer of Cretaceous age.

**WELL CHARACTERISTICS.**--Drilled unused water well, diameter 6 in. to 66 ft, diameter 4 in. from 66 to 390 ft, depth 390 ft, screened 341 to 372 ft, 376 to 387 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 3, 1985, to Jul. 11, 1995, bimonthly measurement with chalked tape. Apr. 30, 1979, to Oct. 2, 1985, occasional measurement with chalked tape. Jan. 5, 1974, to Apr. 30, 1979, continuous strip-chart recorder. Prior to Jan. 5, 1974, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 5 ft above sea level, from topographic map. Measuring point: Top of casing, 2.17 ft above land-surface datum prior to Nov. 18, 1985; 1.3 ft thereafter.

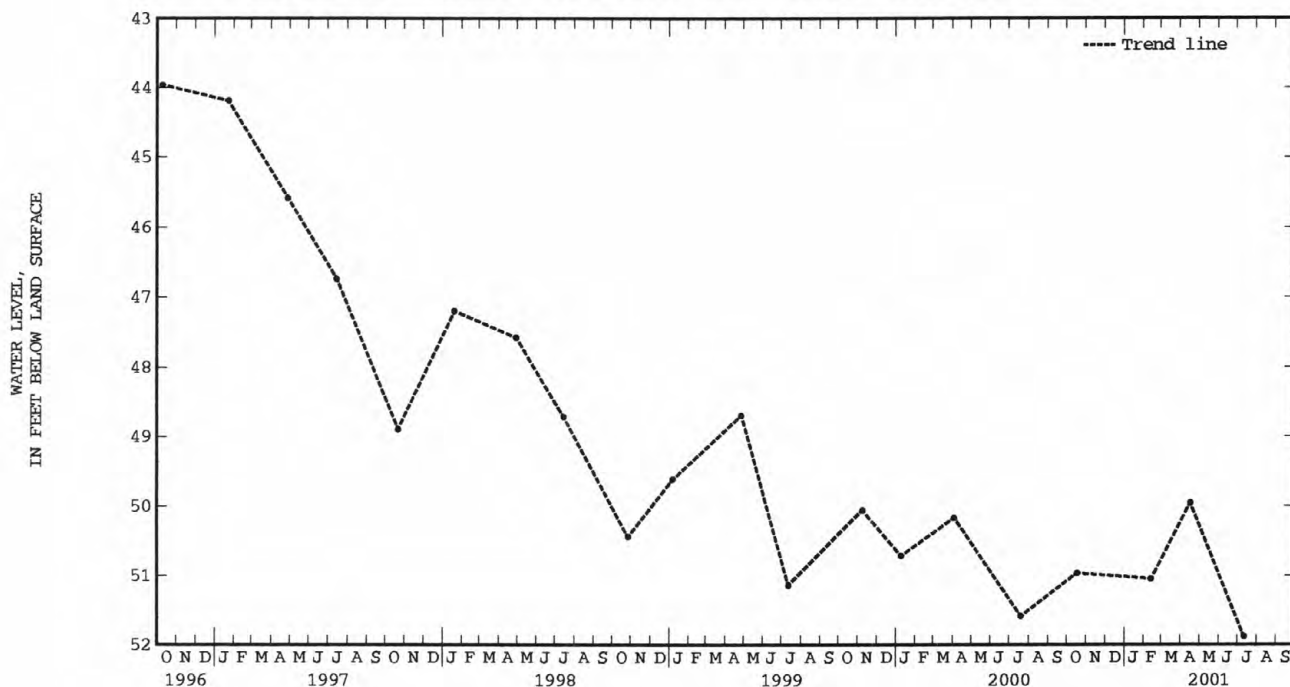
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage and regional drawdown.

**PERIOD OF RECORD.**--August 1972 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 12.82 ft below land-surface datum, Aug. 1, 1972; lowest measured, 51.88 ft below land-surface datum, Jul. 11, 2001.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 18	50.97	FEB 13	51.05	APR 17	49.96	JUL 11	51.88
WATER YEAR 2001		HIGHEST	49.96	APR 17, 2001	LOWEST	51.88	JUL 11, 2001



**GROUND-WATER LEVELS**  
**KING AND QUEEN COUNTY**

374739077052701. Local number, 54L 10.

**LOCATION.**--Lat 37°47'40", long 77°05'26", NAD83, Hydrologic Unit 02080105, at Virginia Department of Transportation wayside picnic table, 50 ft north of U.S. Highway 360 and 1 mi. east of Mattaponi River. Owner: U.S. Geological Survey.

**AQUIFER.**--Chickhominy-Piney Point aquifer of Eocene-Oligocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 2 in., depth 96.21 ft, screened 86.21 ft to 96.21 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by USGS personnel. Prior to October 1998, monthly measurement with chalked tape.

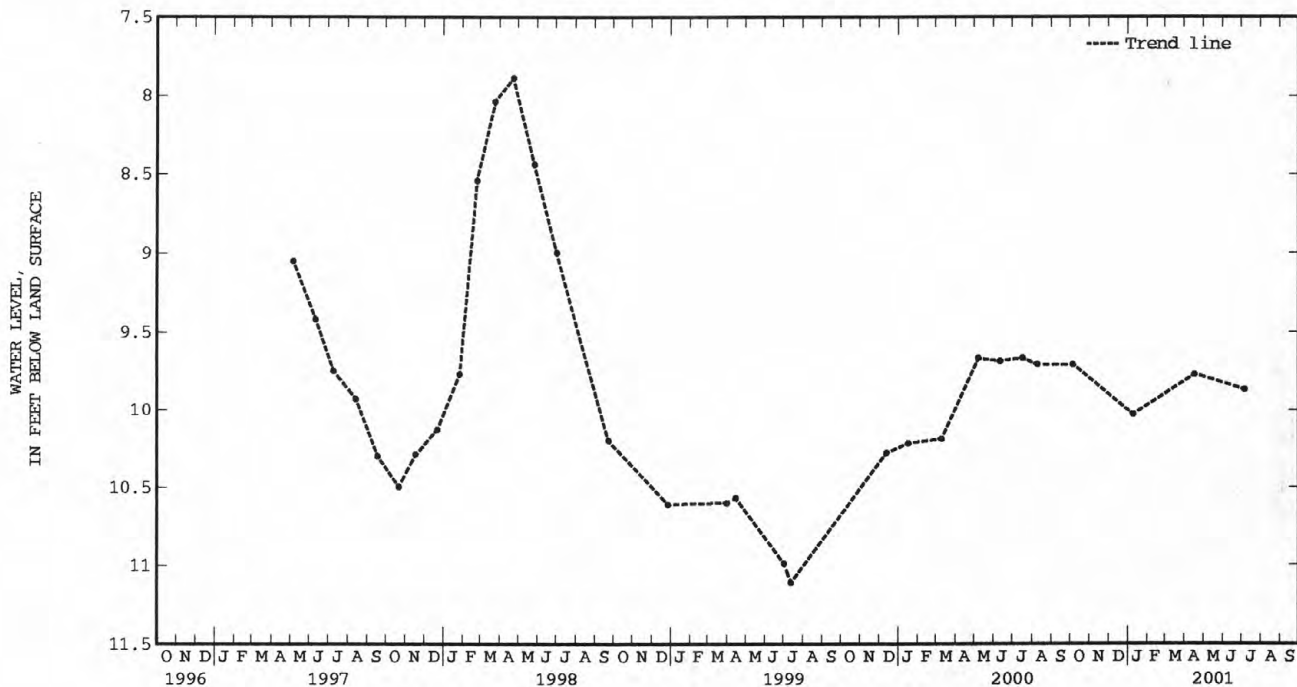
**DATUM.**--Elevation of land-surface datum is 52 ft above sea level, from topographic map. Measuring point: Top of casing, 3.06 ft above land-surface datum.

**PERIOD OF RECORD.**--May 1997 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 7.89 ft below land-surface datum, Apr. 23, 1998; lowest measured, 11.11 ft below land-surface datum, Jul. 13, 1999.

**WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001**

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 06	9.71	JAN 10	10.03	APR 17	9.77	JUL 06	9.87
WATER YEAR 2001		HIGHEST	9.71	OCT 06, 2000	LOWEST	10.03	JAN 10, 2001



## GROUND-WATER LEVELS

155

## KING AND QUEEN COUNTY

373126076454101. Local number, 56J 11 SOW 073.

**LOCATION.**--Lat 37°31'27", long 76°45'40", NAD83, Hydrologic Unit 02080105, at West Point Airport, 1.7 mi southeast of West Point. Owner: St. Laurent Paper Products Corporation (formerly Chesapeake Corporation).

**AQUIFER.**--Lower Potomac aquifer of Cretaceous age.

**WELL CHARACTERISTICS.**--Drilled unused water well, diameter 6 in., depth 1,254 ft, screened 1,233 to 1,248 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by USGS personnel.

**DATUM.**--Elevation of land-surface datum is 15 ft above sea level, from topographic map. Measuring point: Top of casing, 2.5 ft above land-surface datum; prior to Mar. 15, 1993, top of casing, 0.6 ft above land-surface datum.

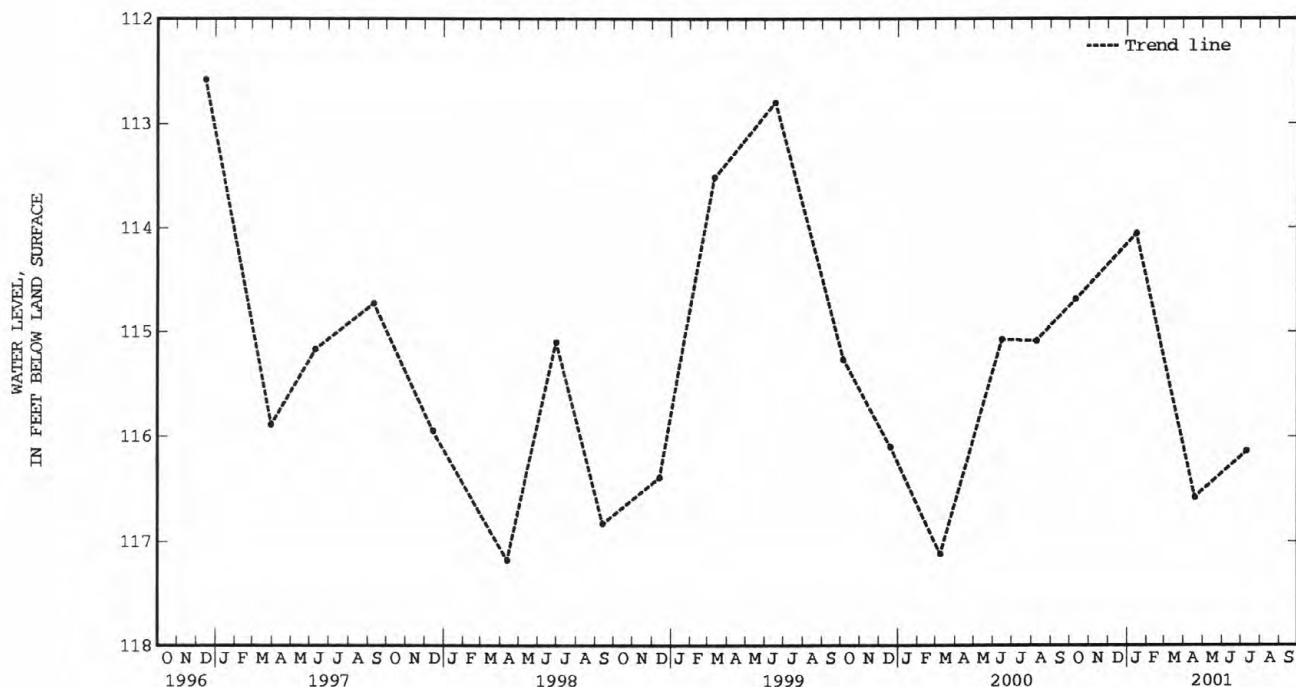
**REMARKS.**--Water level affected by regional drawdown. Water from this well is known to contain concentrations of dissolved solids greater than 1,000 mg/L.

**PERIOD OF RECORD.**--November 1974 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 73.08 ft below land-surface datum, Apr. 25, 1975; lowest measured, 117.18 ft below land-surface datum, Apr. 13, 1998.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 11	114.69	JAN 16	114.06	APR 19	116.58	JUL 10	116.14
WATER YEAR 2001		HIGHEST	114.06	JAN 16, 2001		LOWEST	116.58
				APR 19, 2001			



**GROUND-WATER LEVELS**  
**KING AND QUEEN COUNTY**

373008076425601. Local number, 57J 3 SOW 074.

**LOCATION.**--Lat 37°30'09", long 76°42'55", NAD83, Hydrologic Unit 02080107, off State Highway 606, 0.4 mi northeast of intersection of State Highways 606 and 605, and 2.8 mi south of Shacklefords. Owner: St. Laurent Paper Products Corporation (formerly Chesapeake Corporation).

**AQUIFER.**--Middle Potomac aquifer of Cretaceous age.

**WELL CHARACTERISTICS.**--Drilled unused water well, diameter 6 in. to 200 ft, diameter 4 in. from 200 to 760 ft, depth 760 ft, screened 741 to 756 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by USGS personnel.

**DATUM.**--Elevation of land-surface datum is 51 ft above sea level, from topographic map. Measuring point: Top of casing, 2.60 ft above land-surface datum; prior to Mar. 15, 1993, top of casing, 0.20 ft above land-surface datum.

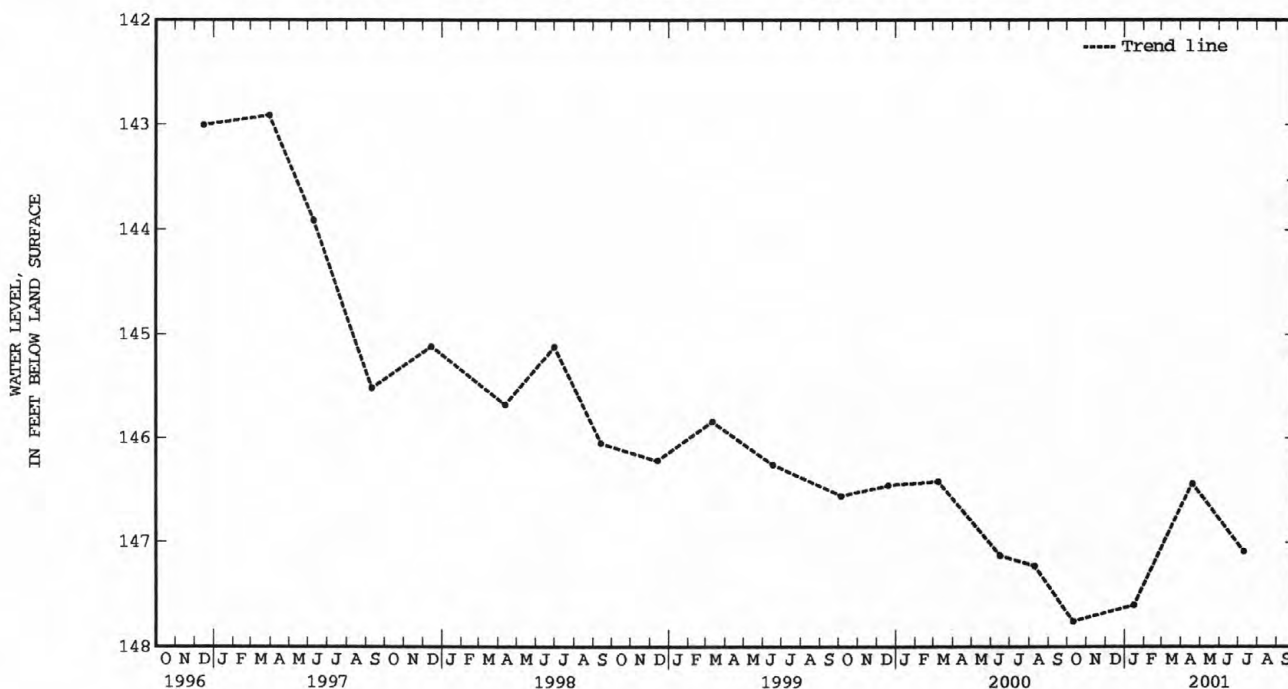
**REMARKS.**--Water level affected by regional drawdown.

**PERIOD OF RECORD.**--November 1974 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 109.90 ft below land-surface datum, Jan. 26, 1975; lowest measured, 147.76 ft below land-surface datum, Oct. 11, 2000.

**WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001**

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 11	147.76	JAN 16	147.60	APR 19	146.44	JUL 10	147.09
WATER YEAR 2001		HIGHEST	146.44	APR 19, 2001	LOWEST	147.76	OCT 11, 2000



## GROUND-WATER LEVELS

157

## KING GEORGE COUNTY

382129077005801. Local number, 54Q 21.

**LOCATION.**--Lat 38°21'29", long 77°00'57", NAD83, Hydrologic Unit 02070011, 200 ft west of the Potomac River, 400 ft south of U.S. Highway 301, 750 ft east of Blandy Boulevard, and at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

**AQUIFER.**--Aquia aquifer of Paleocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 10 in. from 0 to 25 ft, diameter 4 in. from 0 to 197 ft, 217 to 219.25 ft, depth 219.25 ft, screened 197 to 217 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by USGS personnel. Prior to Oct. 26, 1994, digital recorder 60-minute punch.

**DATUM.**--Elevation of land-surface datum is 20.46 ft above sea level. Measuring point: Top of recorder shelf, 2.65 ft above land-surface datum prior to Nov. 4, 1994; top of casing, 2.10 ft thereafter.

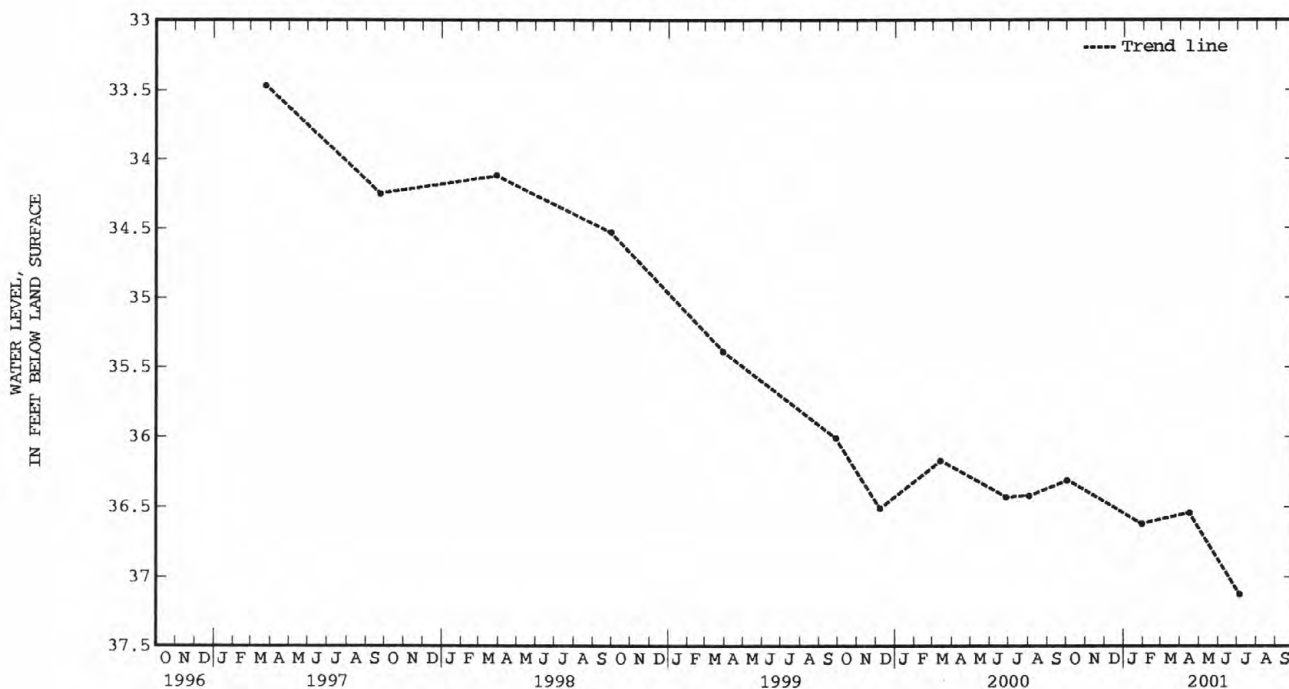
**REMARKS.**--Water level affected by regional drawdown.

**PERIOD OF RECORD.**--September 1992 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level recorded, 29.00 ft below land-surface datum, Mar. 4, 1993; lowest measured, 37.13 ft below land-surface datum, Jul. 5, 2001.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 03	36.31	JAN 30	36.62	APR 16	36.54	JUL 05	37.13
WATER YEAR 2001		HIGHEST	36.31	OCT 03, 2000	LOWEST	37.13	JUL 05, 2001



## GROUND-WATER LEVELS

## KING GEORGE COUNTY

382341077032401. Local number, 54R 2.

**LOCATION.**--Lat 38°23'41", long 77°03'23", NAD83, Hydrologic Unit 02070011, 50 ft southeast of steep bank of the Potomac River, 150 ft west of State Highway 687, 1.5 mi west of the intersection of U.S. Highway 301 and State Highway 614, 1.9 mi north of the intersection of State Highways 629 and 687, and near Dahlgren. Owner: E. V. Bruchez.

**AQUIFER.**--Middle Potomac aquifer of Cretaceous age.

**WELL CHARACTERISTICS.**--Drilled withdrawal water well, diameter 4 in. to 210 ft, diameter 2 in. from 210 to 806 ft, depth 806 ft, screened 781 to 801 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by USGS personnel.

**DATUM.**--Elevation of land-surface datum is 70 ft above sea level, from topographic map. Measuring point: Top of casing, 1.0 ft above land-surface datum.

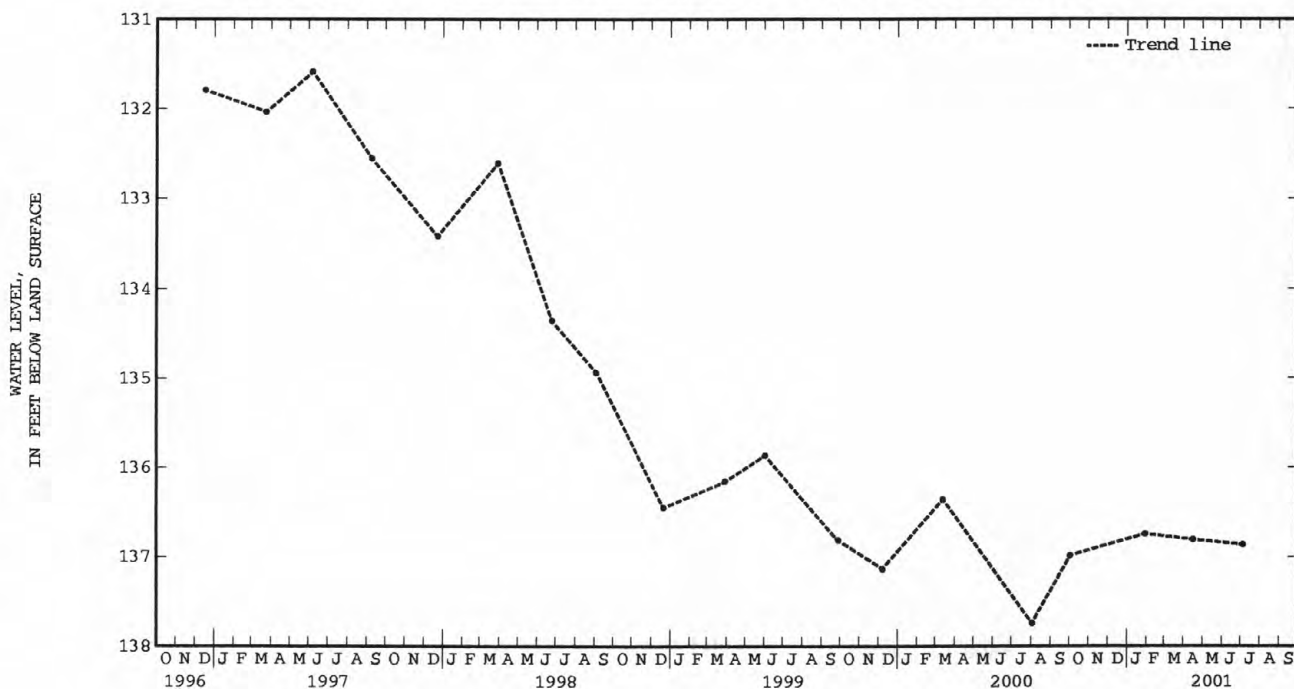
**REMARKS.**--Water level affected by regional drawdown.

**PERIOD OF RECORD.**--October 1969 to current year. Unpublished records available prior to October 1988 in files of the Geological Survey.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 70.00 ft below land-surface datum, Oct. 15, 1969; lowest measured, 137.75 ft below land-surface datum, Aug. 3, 2000.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 03	136.99	JAN 30	136.75	APR 16	136.81	JUL 05	136.87
WATER YEAR 2001		HIGHEST	136.75	JAN 30, 2001		LOWEST	136.99
							OCT 03, 2000





## GROUND-WATER LEVELS

159

## KING WILLIAM COUNTY

373226076481201. Local number, 56J 2.

**LOCATION.**--Lat 37°32'27", long 76°48'11", NAD83, Hydrologic Unit 02080106, 0.1 mi west of State Highway 30, 0.3 mi north of State Highway 33, and in West Point. Owner: St. Laurent Paper Products Corporation (formerly Chesapeake Corporation).

**AQUIFER.**--Brightseat-upper and middle Potomac aquifer of Cretaceous-Paleocene age.

**WELL CHARACTERISTICS.**--Drilled unused withdrawal water well, diameter 18 in. to 300 ft, diameter 8 in. from 300 to 600 ft, depth 600 ft, screened 390 to 400 ft, 550 to 570 ft, 580 to 600 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by USGS personnel.

**DATUM.**--Elevation of land-surface datum is 25 ft above sea level, from topographic map. Measuring point: Top of casing, 1.5 ft above land-surface datum.

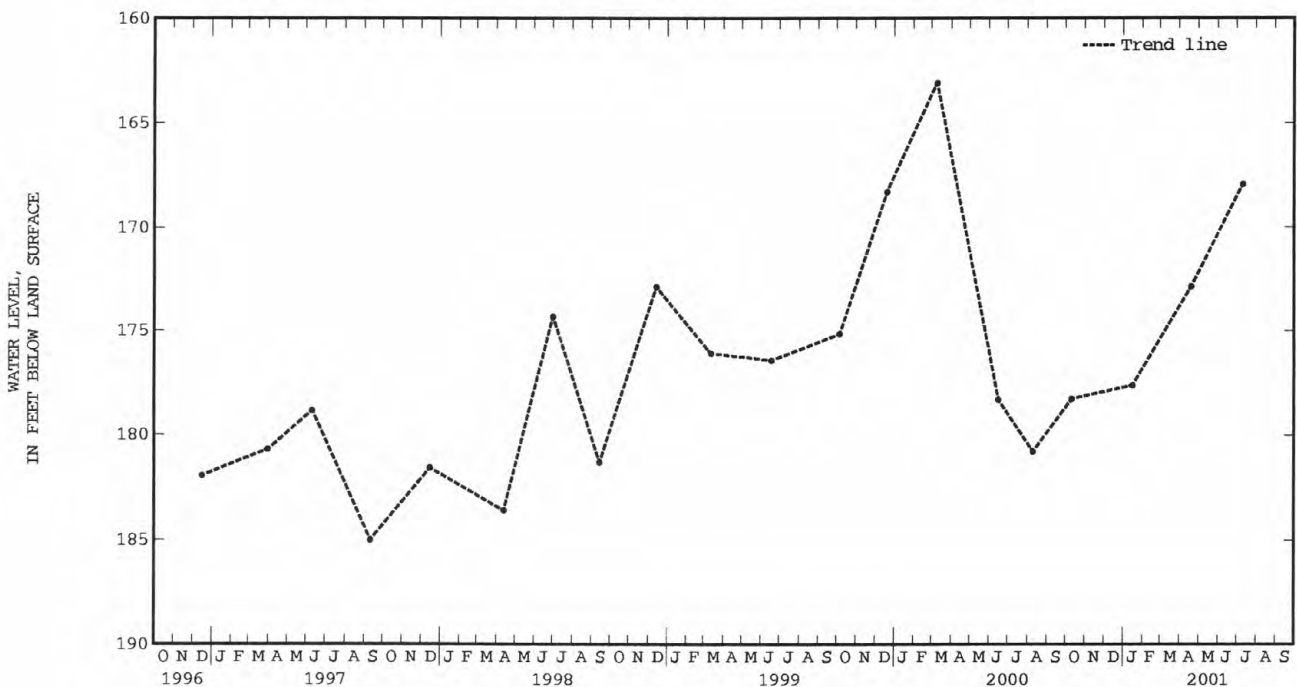
**REMARKS.**--Water level affected by local pumpage and regional drawdown.

**PERIOD OF RECORD.**--November 1982 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 141.48 ft below land-surface datum, Feb. 15, 1983; lowest measured, 185.01 ft below land-surface datum, Sep. 11, 1997.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 11	178.28	JAN 16	177.63	APR 19	172.90	JUL 10	167.96
WATER YEAR 2001		HIGHEST	167.96	JUL 10, 2001	LOWEST	178.28	OCT 11, 2000



## GROUND-WATER LEVELS

## KING WILLIAM COUNTY

373459076510201. Local number, 56J 10.

**LOCATION.**--Lat 37°35'00", long 76°51'01", NAD83, Hydrologic Unit 02080105, 100 ft northeast of State Highway 30 at the Virginia State Police office, 4.2 mi west of the intersection of State Highways 30 and 33 in West Point. Owner: Virginia Department of State Police.

**AQUIFER.**--Brightseat-upper Potomac aquifer of Cretaceous-Paleocene age.

**WELL CHARACTERISTICS.**--Drilled withdrawal water well, diameter 4 in., depth 437 ft, screened 417 to 437 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by USGS personnel.

**DATUM.**--Elevation of land-surface datum is 101 ft above sea level, from topographic map. Measuring point: Top of casing, 1.2 ft below land-surface datum.

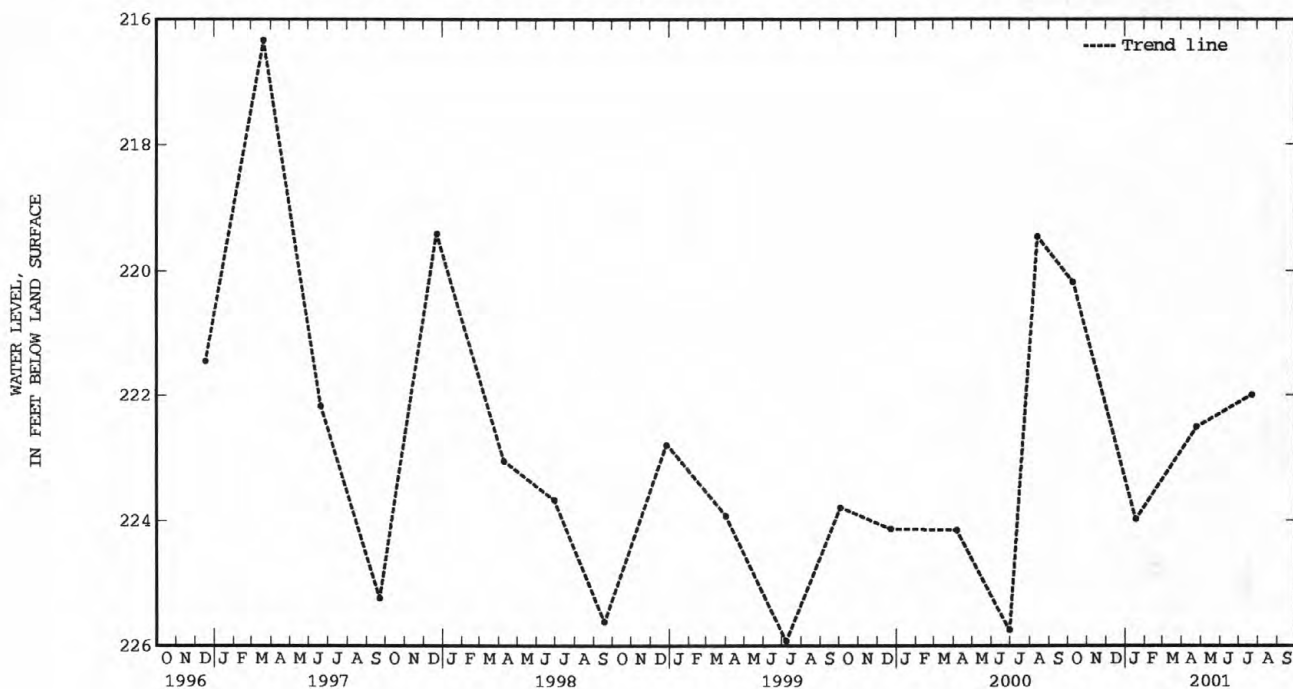
**REMARKS.**--Water level affected by regional drawdown.

**PERIOD OF RECORD.**--December 1972, December 1974, October 1983 to current year. Unpublished records available prior to October 1987 in files of the Geological Survey.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 176.00 ft below land-surface datum, Dec. 8, 1972; lowest measured, 225.93 ft below land-surface datum, Jul. 8, 1999.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 10	220.18	JAN 18	223.99	APR 25	222.52	JUL 23	222.00
WATER YEAR 2001		HIGHEST	220.18	OCT 10, 2000	LOWEST	223.99	JAN 18, 2001



## GROUND-WATER LEVELS

161

## LANCASTER COUNTY

374249076230101. Local number, 59K 1 SOW 015.

**LOCATION.**--Lat 37°42'49", long 76°23'00", NAD83, Hydrologic Unit 02080104, at Lancaster County High School in Kilmarnock. Owner: Lancaster County Public Schools.

**AQUIFER.**--Brightseat-upper Potomac aquifer of Cretaceous-Paleocene age.

**WELL CHARACTERISTICS.**--Drilled unused water well, diameter 4 in. to 163 ft, diameter 2 in. from 163 to 716 ft, depth 716 ft, screened 706 to 716 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 2, 1985, to Jul. 11, 1995, bimonthly measurement with chalked tape. Sep. 30, 1976, to Oct. 1, 1985, occasional measurement with chalked tape. Prior to Sep. 30, 1976, continuous strip-chart recorder.

**DATUM.**--Elevation of land-surface datum is 85 ft above sea level, from topographic map. Measuring point: Top of casing, at land-surface datum prior to Jul. 29, 1991; 0.75 ft above land-surface datum thereafter.

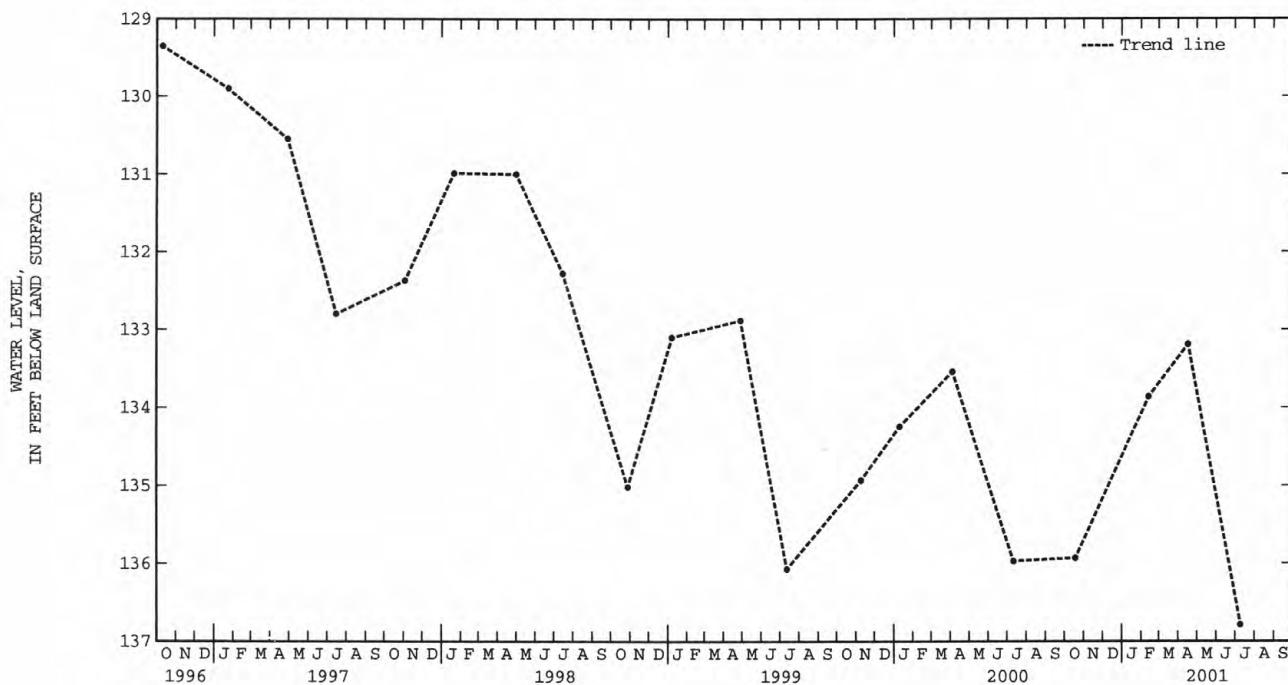
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage and regional drawdown.

**PERIOD OF RECORD.**--October 1967 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level recorded, 95.89 ft below land-surface datum, Feb. 20, 1968; lowest measured, 136.79 ft below land-surface datum, Jul. 9, 2001.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 18	135.93	FEB 13	133.86	APR 17	133.19	JUL 09	136.79
WATER YEAR 2001		HIGHEST	133.19	APR 17, 2001	LOWEST	136.79	JUL 09, 2001



## GROUND-WATER LEVELS

## LANCASTER COUNTY

374142076272701. Local number, 59K 9.

**LOCATION.**--Lat 37°41'42", long 76°27'26", NAD83, Hydrologic Unit 02080104, on the south bank of Moran Creek, 1,000 ft northwest of the intersection of State Highway 630 and a private dirt drive, 0.8 mi west of Wesley Church, 3.0 mi north of Weems, 4.0 mi west of Kilmarnock and the intersection of State Highways 629 and 630, and near Weems. Owner: Fred Hansen.

**AQUIFER.**--Brightseat-upper Potomac aquifer of Cretaceous-Paleocene age.

**WELL CHARACTERISTICS.**--Drilled withdrawal water well, diameter 4 in. to 147 ft, diameter 2 in. from 147 to 585 ft, depth 585 ft, screened 565 to 580 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by USGS personnel.

**DATUM.**--Elevation of land-surface datum is 10 ft above sea level, from topographic map. Measuring point: Top of casing, 1.2 ft above land-surface datum.

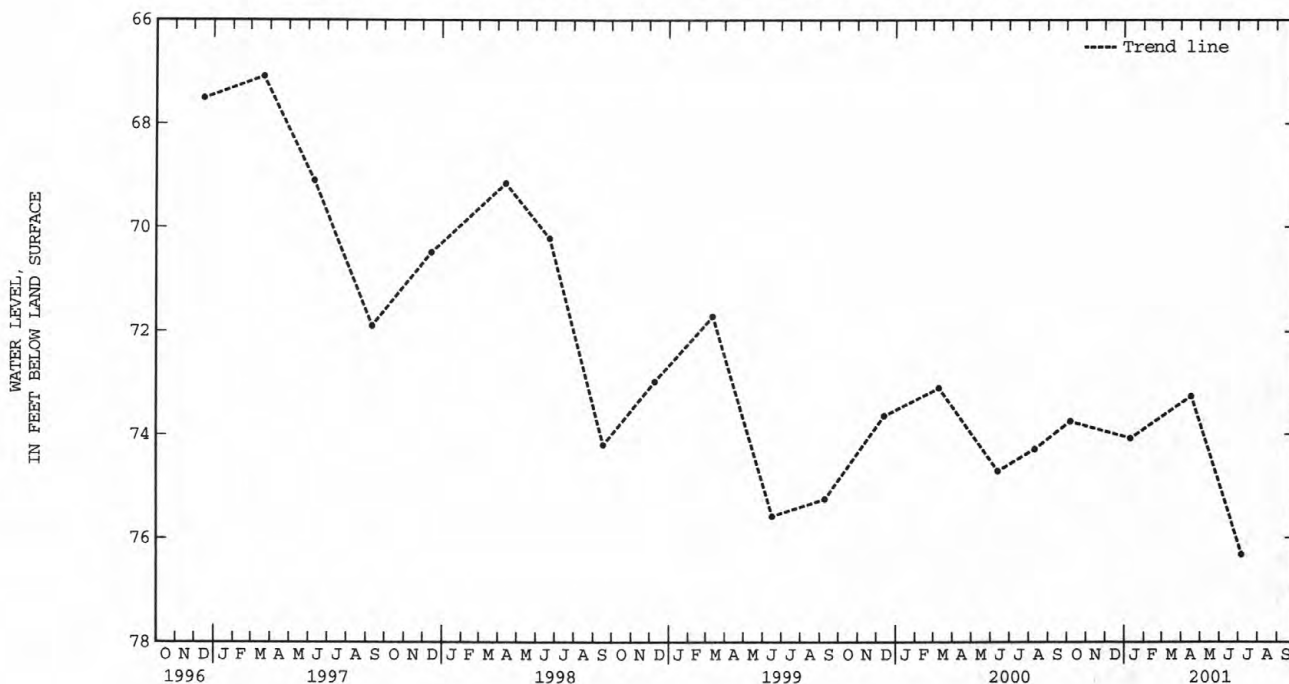
**REMARKS.**--Water level affected by regional drawdown.

**PERIOD OF RECORD.**--September 1969 to current year. Unpublished records available prior to October 1988 in files of the Geological Survey.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 40.00 ft below land-surface datum, Sep. 16, 1969; lowest measured, 76.32 ft below land-surface datum, Jul. 6, 2001.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 06	73.75	JAN 10	74.08	APR 17	73.26	JUL 06	76.32
WATER YEAR 2001		HIGHEST	73.26	APR 17, 2001	LOWEST	76.32	JUL 06, 2001



## GROUND-WATER LEVELS

163

## LOUDOUN COUNTY

391542077423801. Local number, 49Y 1 SOW 022.

**LOCATION.**--Lat 39°15'42", long 77°42'37", NAD83, Hydrologic Unit 02070008, 4.2 mi southeast of Harpers Ferry. Owner: American Telephone and Telegraph Company.

**AQUIFER.**--Bedrock of Precambrian or Cambrian age.

**WELL CHARACTERISTICS.**--Drilled unused water well, diameter 6.5 in., depth 516 ft, cased to 45 ft, open hole 45 to 516 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to Oct. 1, 1996, bimonthly measurement with chalked tape. Sep. 30, 1974, to Sep. 30, 1985, occasional measurement with chalked tape. Prior to Sep. 30, 1974, continuous strip-chart recorder.

**DATUM.**--Elevation of land-surface datum is 1,100 ft above sea level, from topographic map. Measuring point: Top of casing, at land-surface datum.

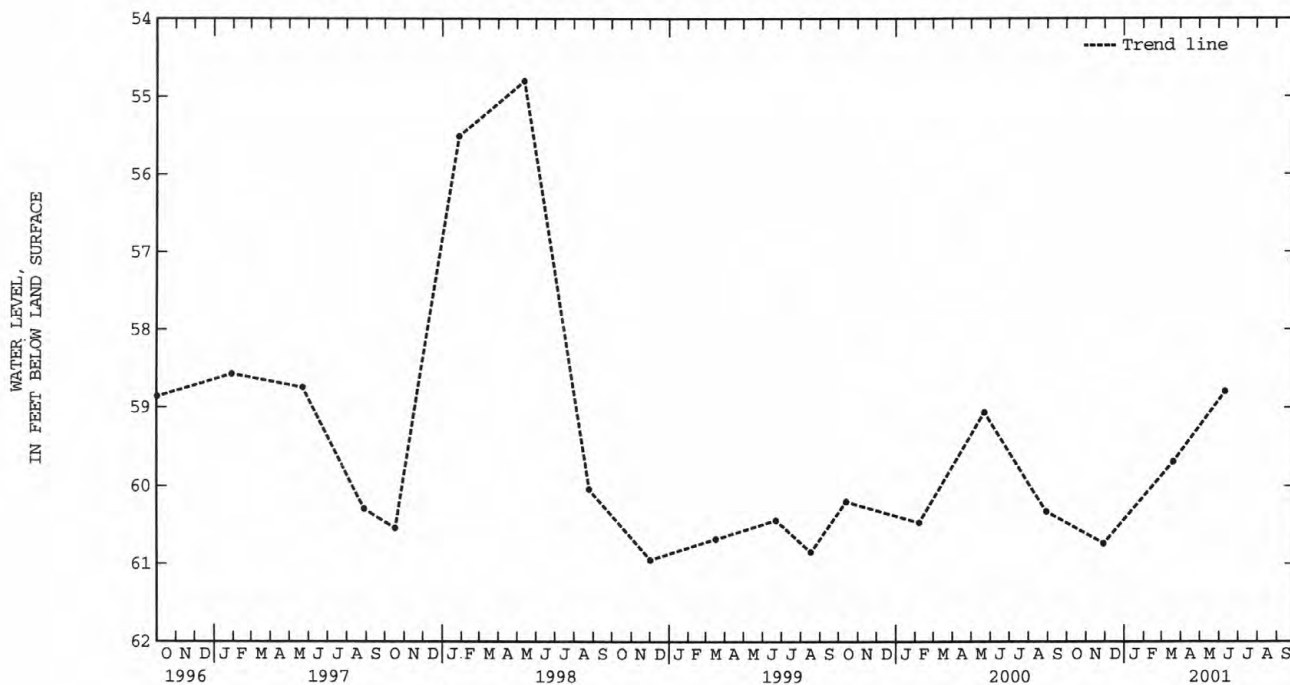
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division.

**PERIOD OF RECORD.**--August 1969 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level recorded, 48.00 ft below land-surface datum, Jun. 22, 1972; lowest measured, 61.80 ft below land-surface datum, Dec. 2, 1992.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL		
NOV 28	60.74	MAR 20	59.69	JUN 11	58.79		
WATER YEAR 2001		HIGHEST	58.79	JUN 11, 2001	LOWEST	60.74	NOV 28, 2000



## GROUND-WATER LEVELS

## LOUDOUN COUNTY

390623077314201. Local number, 50W 4C.

**LOCATION.**--Lat 39°06'23", long 77°31'41", NAD83, Hydrologic Unit 02070008, under water tower 500 ft east of State Highway 7, 0.75 mi east of Leesburg. Owner: Town of Leesburg.

**AQUIFER.**--Slightly metamorphosed Balls Bluff Formation of Late Triassic age.

**WELL CHARACTERISTICS.**--Drilled unused water well, diameter 6 in., depth 535 ft, cased to 6 ft, open hole 6 to 535 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by USGS personnel.

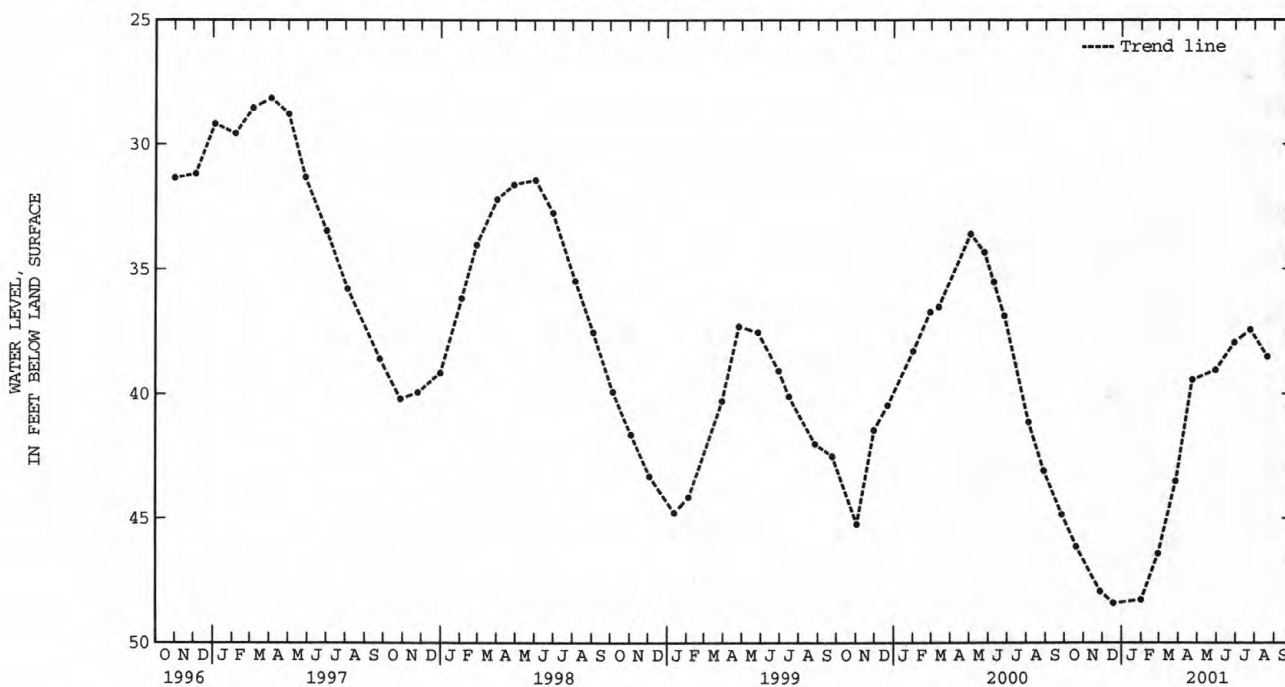
**DATUM.**--Elevation of land-surface datum is 400 ft above sea level, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum.

**PERIOD OF RECORD.**--October 1977 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 28.13 ft below land-surface datum, Apr. 3, 1997; lowest measured, 49.06 ft below land-surface datum, Nov. 27, 1985.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 19	46.14	DEC 18	48.40	FEB 27	46.42	APR 23	39.44	JUN 29	37.95	AUG 21	38.53
NOV 27	47.94	JAN 31	48.27	MAR 27	43.50	MAY 30	39.05	JUL 25	37.45		
WATER YEAR 2001		HIGHEST	37.45	JUL 25, 2001	LOWEST	48.40	DEC 18, 2000				





## 165

380217078133701. Local number, 45N 1.

**AQUIFER.**--Metagraywacke, quartzose schist, and melange of Cambrian age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 6 in., depth 56 ft, length of casing unknown.

**INSTRUMENTATION.**--Continuous strip-chart recorder.

**DATUM.**--Elevation of land-surface datum is 500 ft above sea level, from topographic map. Measuring point: Top of casing, 1.95 ft above land-surface datum.

REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Missing record due to recorder malfunction.

**PERIOD OF RECORD.**--July 1952 to current year.

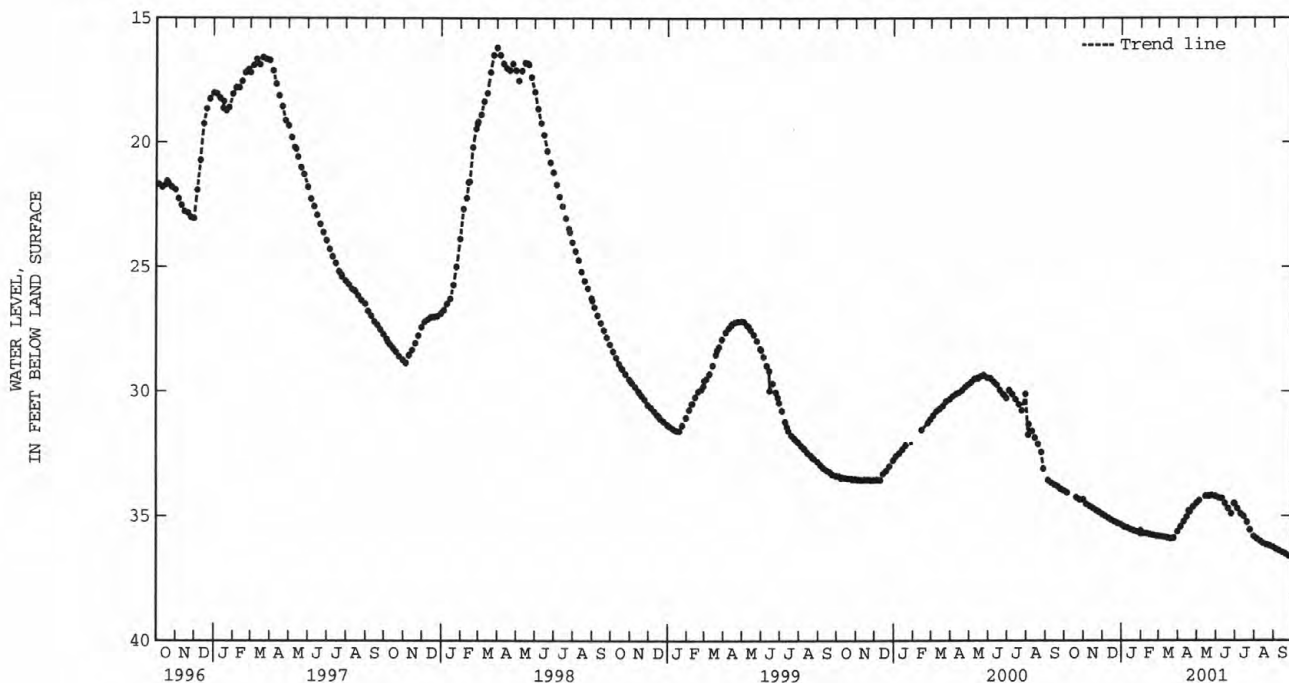
**EXTREMES FOR PERIOD OF RECORD.**--Highest water level recorded, 10.63 ft below land-surface datum, Apr. 18, 19, 1993; lowest measured, 36.67 ft below land-surface datum, Sept. 30, 2001.

**EXTREMES FOR CURRENT YEAR.**--Highest instantaneous water level, 33.99 ft below land-surface datum, Oct. 1; lowest instantaneous water level, 36.67 ft below land-surface datum, Sept. 30.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	34.06	34.52	35.00	35.42	35.68	35.81	35.42	34.38	34.28	34.71	35.92	36.33
10	---	34.60	35.08	35.47	35.70	35.84	35.22	---	34.30	34.91	36.00	36.39
15	---	34.68	35.15	35.53	35.74	35.86	35.04	34.21	34.50	35.02	36.10	36.45
20	34.26	34.77	35.22	35.58	35.76	35.90	34.83	34.20	34.71	35.25	36.14	36.52
25	34.34	34.83	35.29	35.62	35.80	35.87	34.64	34.18	34.91	35.54	36.18	36.60
EOM	34.35	34.92	35.34	35.58	35.80	35.62	34.50	34.22	34.50	35.81	36.25	36.67

WATER YEAR 2001	HIGHEST	34.06	OCT 05, 2000	LOWEST	36.67	SEP 30, 2001
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## GROUND-WATER LEVELS

## LOUISA COUNTY

380043078111301. Local number, 45N 4.

**LOCATION.**--Lat 38°00'46", long 78°11'13", NAD83, Hydrologic Unit 02080106, 0.25 mi east of U.S. Highway 15, 4.1 mi south of Boswells Tavern. Owner: Virginia Department of Corrections.

**AQUIFER.**--Metamorphosed sedimentary and volcanic rocks of unknown age.

**WELL CHARACTERISTICS.**--Drilled unused water well, diameter 6 in., depth 200 ft, cased to 42 ft, open hole 42 to 200 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by USGS personnel.

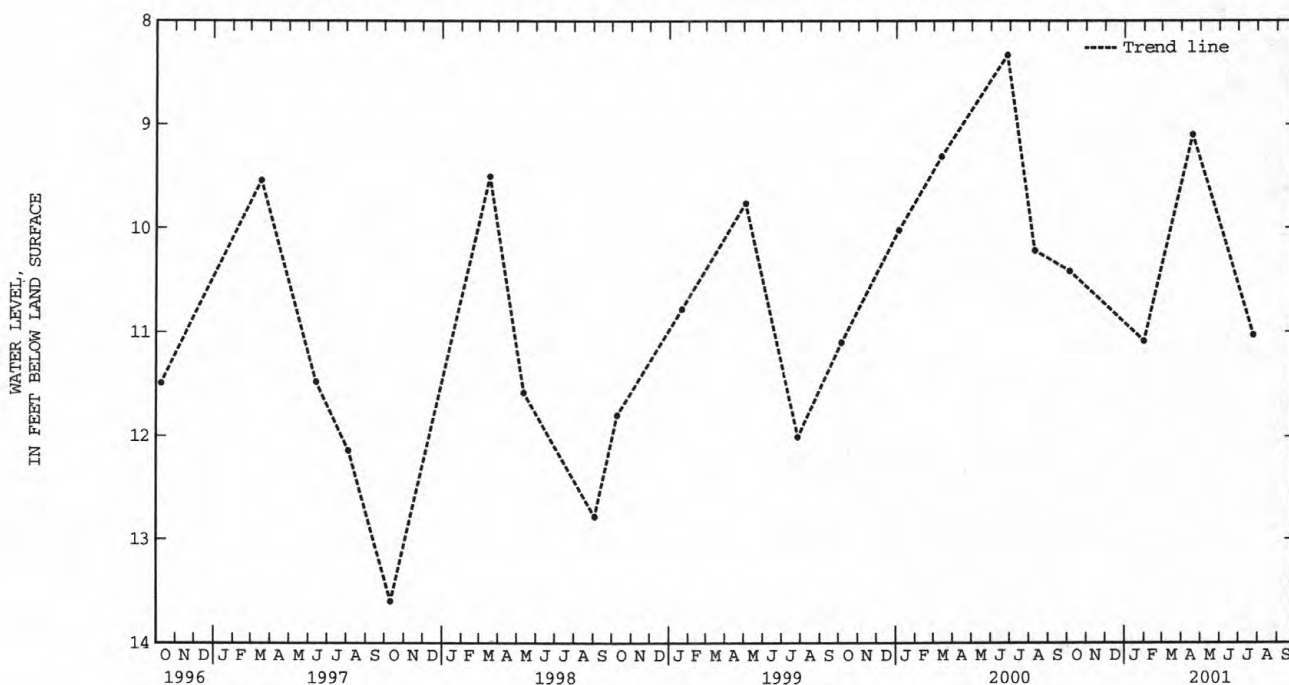
**DATUM.**--Elevation of land-surface datum is 415 ft above sea level, from topographic map. Measuring point: Top of casing, 2.3 ft above land-surface datum.

**PERIOD OF RECORD.**--February 1977 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 8.33 ft below land-surface datum, Jun. 26, 2000; lowest measured, 14.43 ft below land-surface datum, Aug. 26, 1981.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 04	10.42	JAN 31	11.09	APR 18	9.10	JUL 25	11.03
WATER YEAR 2001		HIGHEST	9.10	APR 18, 2001		LOWEST	11.09
							JAN 31, 2001



## GROUND-WATER LEVELS

167

## LOUISA COUNTY

380131078001001. Local number, 46N 1 SOW 056.

**LOCATION.**--Lat 38°01'32", long 78°00'09", NAD83, Hydrologic Unit 02080106, 200 ft northeast of intersection of U.S. Highway 33 and State Highway 208 in Louisa. Owner: Town of Louisa.

**AQUIFER.**--Metamorphosed sedimentary and volcanic rocks of unknown age.

**WELL CHARACTERISTICS.**--Drilled unused water well, diameter 6 in., depth 132 ft, length of casing unknown.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 4, 1985, to Sep. 30, 1993, bimonthly measurement with chalked tape. Mar. 31, 1979, to Oct. 4, 1985, occasional measurement with chalked tape. Prior to Mar. 31, 1979, continuous strip-chart recorder.

**DATUM.**--Elevation of land-surface datum is 455 ft above sea level, from topographic map. Measuring point: Top of casing, 0.6 ft above land-surface datum.

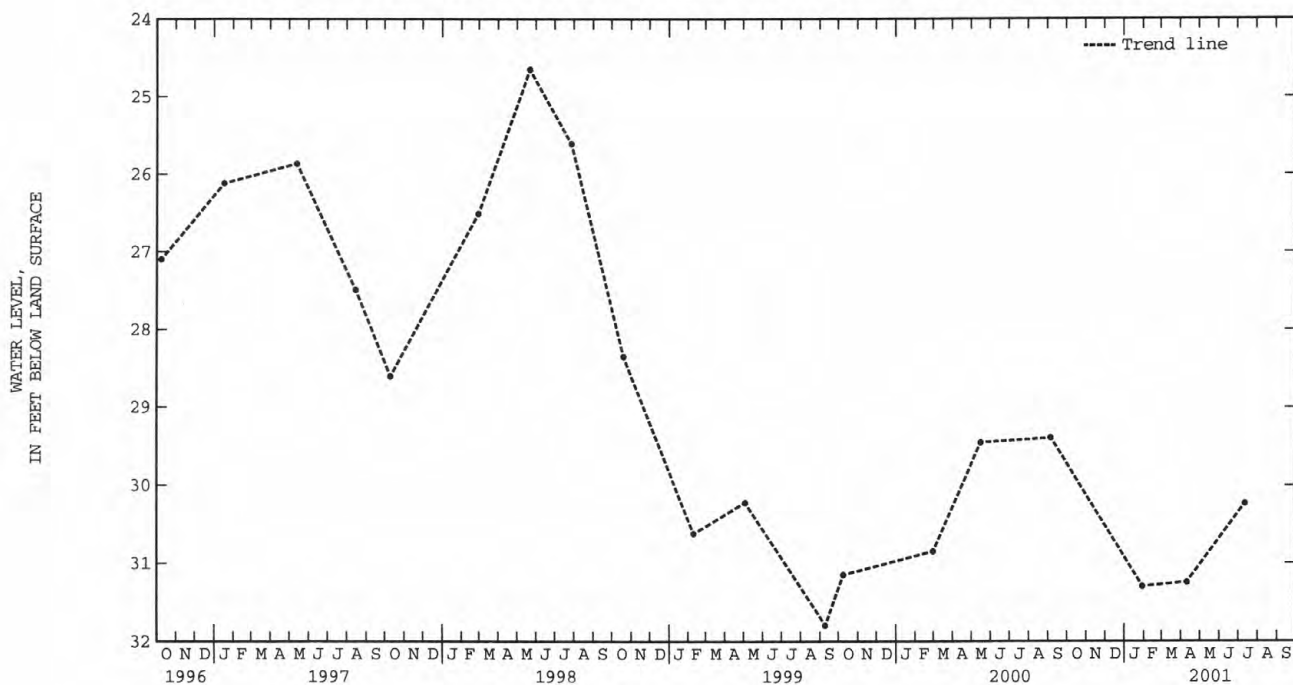
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division.

**PERIOD OF RECORD.**--March 1972 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level recorded, 24.65 ft below land-surface datum, May 21, 1998; lowest measured, 34.78 ft below land-surface datum, Dec. 8, 1981.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL		
JAN 29	31.30	APR 10	31.25	JUL 12	30.23		
WATER YEAR 2001		HIGHEST	30.23	JUL 12, 2001	LOWEST	31.30	JAN 29, 2001



## GROUND-WATER LEVELS

## MATHEWS COUNTY

372545076240101. Local number, 59H 1.

**LOCATION.**--Lat 37°25'45", long 76°24'00", NAD83, Hydrologic Unit 02080102, 0.5 mi south of the intersection of State Highway 617 and private dirt road at the shore line of Greenmansion Cove at North and 0.7 mi southeast of the intersection of State Highways 14 and 617. Owner: G. T. Abernathy.

**AQUIFER.**--Aquia aquifer of Paleocene age.

**WELL CHARACTERISTICS.**--Drilled flowing water well, diameter 4 in., depth 568 ft, depth of screen unknown.

**INSTRUMENTATION.**--Occasional measurement with manometer or chalked tape by USGS personnel.

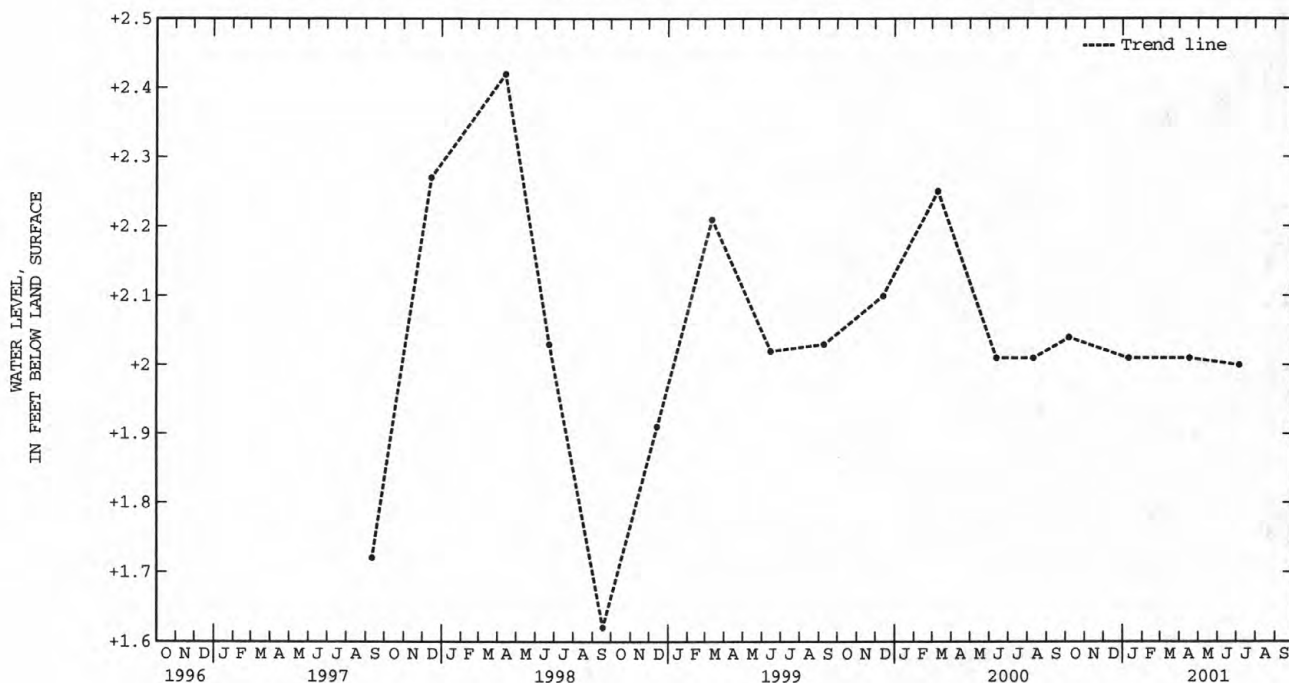
**DATUM.**--Elevation of land-surface datum is 5 ft above sea level, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum.

**PERIOD OF RECORD.**--January 1950 to December 1995, September 1997 to current year. Unpublished records available prior to October 1988 in files of the Geological Survey.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 5.70 ft above land-surface datum, Feb. 12, 1980; lowest measured, 1.00 ft above land-surface datum, Jan. 1, 1950.

**WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001**  
(READINGS ABOVE LAND SURFACE INDICATED BY "+")

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 06	+2.04	JAN 10	+2.01	APR 17	+2.01	JUL 06	+2.00
WATER YEAR 2001		HIGHEST	+2.04	OCT 06, 2000	LOWEST	+2.00	JUL 06, 2001



## GROUND-WATER LEVELS

169

## MIDDLESEX COUNTY

373630076312601. Local number, 58J 5.

**LOCATION.**--Lat 37°36'31", long 76°31'25", NAD83, Hydrologic unit 02080104, 1100 ft west of State Highway 619, 3 mi north of State Highway 33. Owner: Robert Bunch.

**AQUIFER.**--Middle Potomac aquifer of Cretaceous age.

**WELL CHARACTERISTICS.**--Drilled unused water well, diameter 14 in., 0 to 400 ft, 8 in., 400 to 730 ft, depth 730 ft, screened 507 to 522 ft, 527 to 542 ft, 550 to 560 ft, 578 to 588 ft, 650 to 660 ft, 669 to 679 ft, 688 to 703 ft, 710 to 730 ft.

**INSTRUMENTATION.**--Occasional measurement with chalk tape by USGS personnel.

**DATUM.**--Elevation of land surface datum is 40 ft above sea level, from topographic map. Measuring point: Bottom of pump motor mount flange, 1.17 ft above land surface datum.

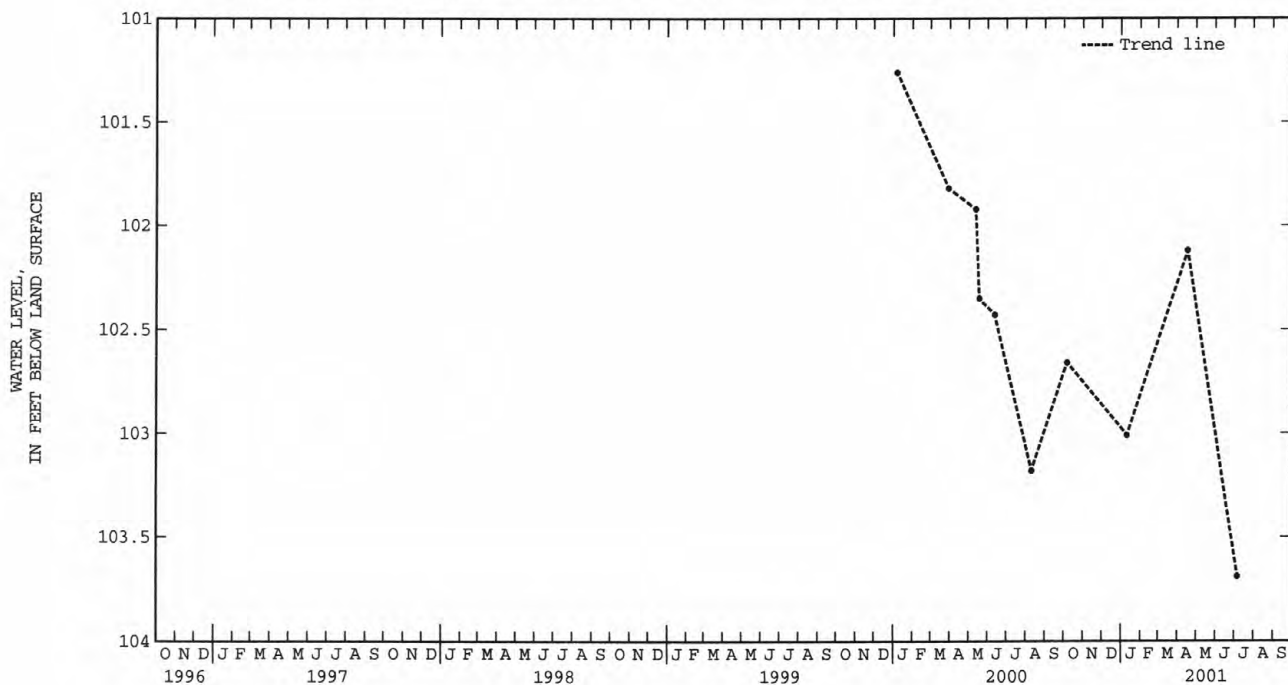
**REMARKS.**--Water level affected by regional drawdown.

**PERIOD OF RECORD.**--June 1974, January 2000 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured 85.54 ft below land-surface datum, Jun. 3, 1974; lowest measured, 103.69 ft below land-surface datum, Jul. 6, 2001.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 06	102.66	JAN 10	103.01	APR 17	102.12	JUL 06	103.69
WATER YEAR 2001		HIGHEST	102.12	APR 17, 2001	LOWEST	103.69	JUL 06, 2001



## GROUND-WATER LEVELS

## MIDDLESEX COUNTY

373149076251501. Local number, 59J 16.

**LOCATION.**--Lat 37°31'45", long 76°25'15", NAD83, Hydrologic unit 02080102, 20 ft southwest of 59J 25, 165 ft east of State Highway 3, 350 ft north of Coves of Wilton Creek entrance road, 1.25 mi north of Piankatank Creek. Owner: CWD Development Co. LLC.

**AQUIFER.**--Yorktown-Eastover aquifer of Miocene to Pliocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 100 ft, casing 0 to 80 ft, 90 to 100 ft, screened 80 to 90 ft.

**INSTRUMENTATION.**--Occasional measurement with chalk tape by USGS personnel.

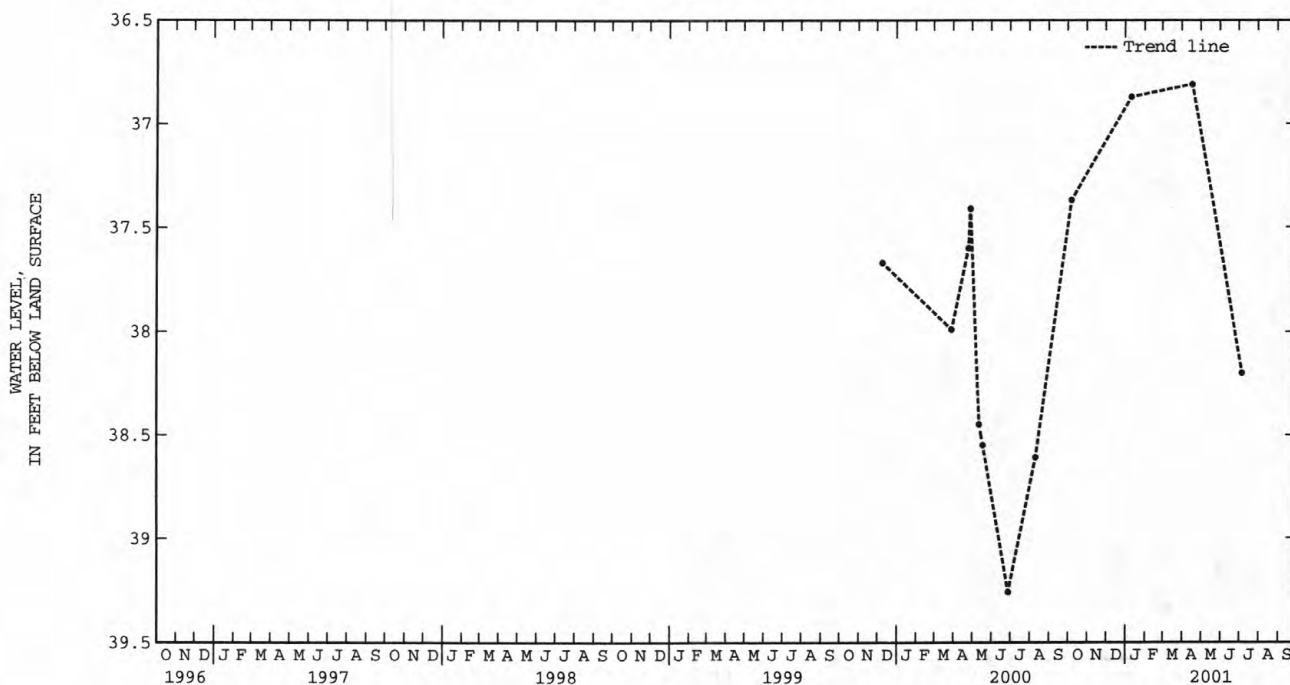
**DATUM.**--Elevation of land surface datum is 40 ft above sea level, from topographic map. Measuring point: Top of casing, 1.05 ft above land surface datum.

**PERIOD OF RECORD.**--December 1999 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 36.81 ft below land-surface datum, Apr. 17, 2001; lowest measured, 39.26 ft below land-surface datum, Jun. 27, 2000.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 06	37.37	JAN 10	36.87	APR 17	36.81	JUL 06	38.20
WATER YEAR 2001		HIGHEST	36.81	APR 17, 2001	LOWEST	38.20	JUL 06, 2001





# GROUND-WATER LEVELS

171

## MIDDLESEX COUNTY

373145076251601. Local number, 59J 25.

**LOCATION.**--Lat 37°31'45", long 76°25'15", NAD83, Hydrologic unit 02080102, 20 ft northeast of 59J 16, 165 ft east of State Highway 3, 350 ft north of Coves of Wilton Creek entrance road, 1.25 mi north of Piankatank Creek. Owner: CWD Development Co. LLC.

**AQUIFER.**--Columbia aquifer of Quaternary age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 2 in., depth 43 ft, casing depth unknown, screened depth unknown.

**INSTRUMENTATION.**--Occasional measurement with chalk tape by USGS personnel.

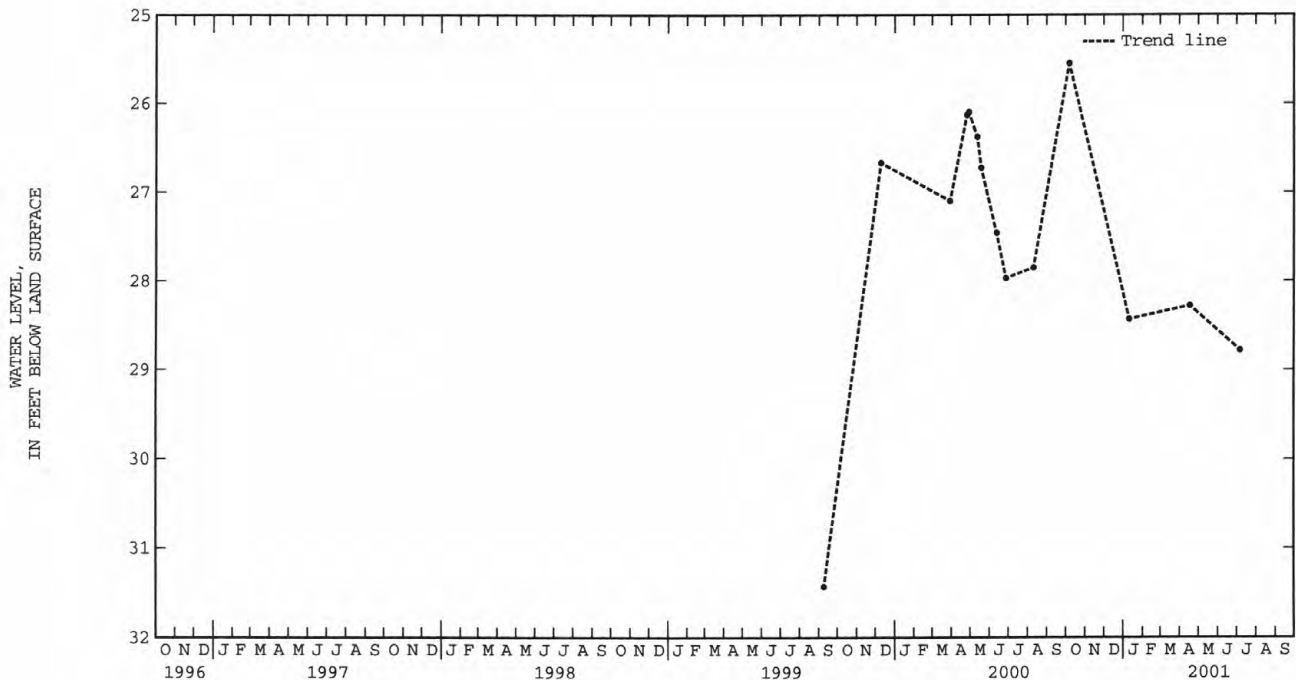
**DATUM.**--Elevation of land surface datum is 40 ft above sea level, from topographic map. Measuring point: Top of casing, 1.87 ft above-land surface datum.

**PERIOD OF RECORD.**--September 1999 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 25.55 ft below land-surface datum, Oct. 6, 2000; lowest measured, 31.43 ft below land-surface datum Sep. 9, 1999.

### WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 06	25.55	JAN 10	28.43	APR 17	28.28	JUL 06	28.78
WATER YEAR 2001		HIGHEST	25.55	OCT 06, 2000	LOWEST	28.78	JUL 06, 2001



## GROUND-WATER LEVELS

## MIDDLESEX COUNTY

373125076251501. Local number, 59J 27.

**LOCATION.**--Lat 37°31'25", long 76°25'14", NAD83, Hydrologic unit 02080102, 1000 ft east of State Highway 3, 0.9 mi north of Piankatank Creek. Owner: Carolyn Wuyts.

**AQUIFER.**--Upper Potomac aquifer of Cretaceous age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 1001 ft, casing 0 to 981 ft, screened 981 to 1001 ft.

**INSTRUMENTATION.**--Occasional measurement with chalk tape by USGS personnel.

**DATUM.**--Elevation of land surface datum is 30 ft above sea level, from topographic map. Measuring point: Top of casing, 1.28 ft above land surface datum.

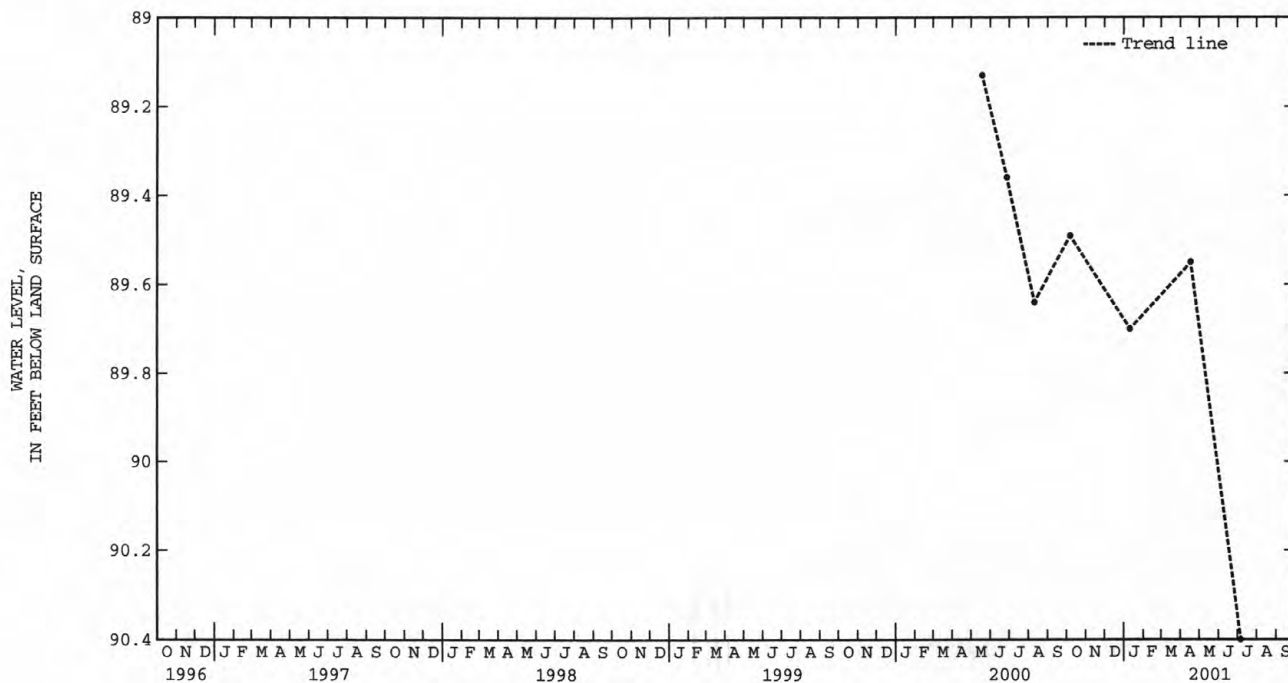
**REMARKS.**--Water level affected by regional drawdown.

**PERIOD OF RECORD.**--May 2000 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 89.13 ft below land-surface datum, May 18, 2000; lowest measured, 90.40 ft below land-surface datum Jul. 6, 2001.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 06	89.49	JAN 10	89.70	APR 17	89.55	JUL 06	90.40
WATER YEAR 2001		HIGHEST	89.49	OCT 06, 2000	LOWEST	90.40	JUL 06, 2001



## 173

370812080261901. Local number, 27F 2 SOW 019.

**AQUIFER.**--Beekmantown Formation of Early Ordovician age.

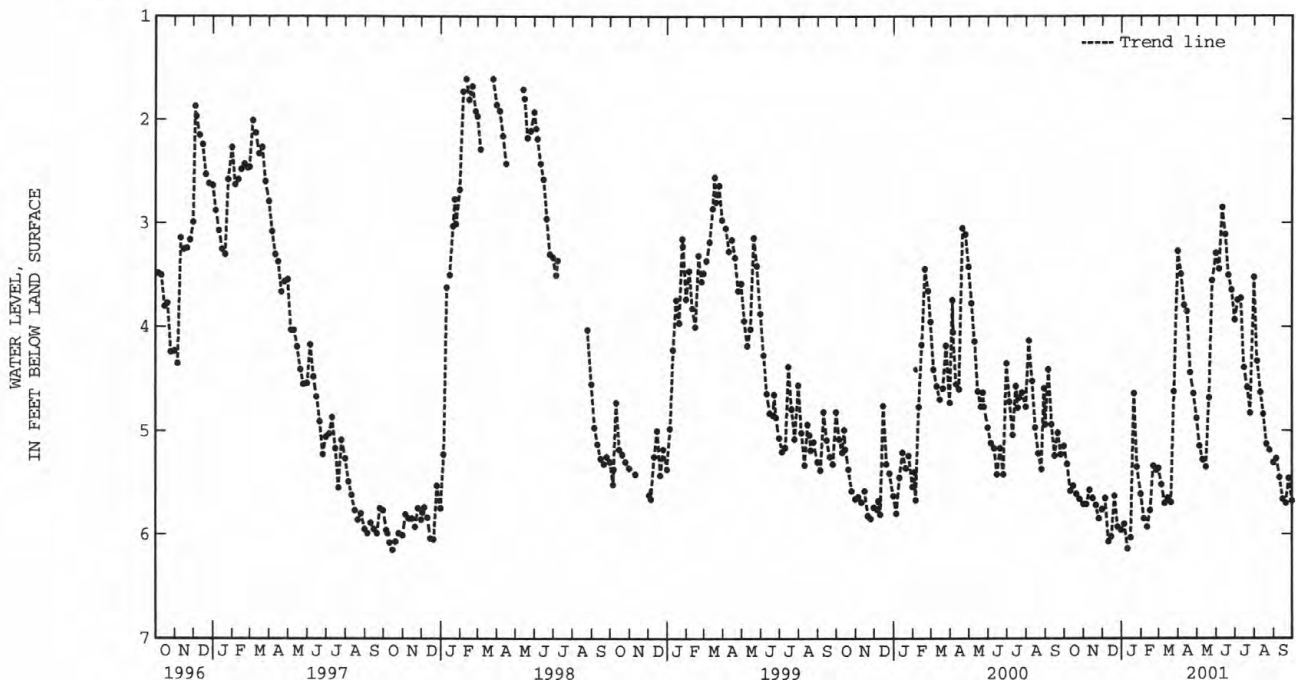
**INSTRUMENTATION.**--Continuous strip-chart recorder. Prior to Apr. 5, 1969, one measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel.

**REMARKS.**---Records provided by the Virginia Department of Environmental Quality - Water Division. Lowest recorded water level, 7.39 ft, is a result of the Mexico earthquake of Sep. 19, 1985, but is not shown as the minimum of record since it is an earthquake affected measurement. Prior to May 1, 1990, brief periods when water flowed over top of casing. Missing record due to recorder malfunction.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level recorded, 0.02 ft above land-surface datum, Mar. 28, 1993; lowest recorded, 7.30 ft below land-surface datum, Dec. 5, 1969.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

WATER YEAR 2001	HIGHEST	2.85	JUN 10, 2001	LOWEST	6.14	JAN 10, 2001
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## GROUND-WATER LEVELS

## NEW KENT COUNTY

373111077104601. Local number, 53J 6.

**LOCATION.**--Lat 37°31'12", long 77°10'45", NAD83, Hydrologic Unit 02080206, 0.18 mi south of State Highway 249 in Brookwood Manor Subdivision, 0.7 mi northeast of the intersection of Interstate Highway 64 and State Highway 249, and 2.95 mi southwest of Quinton. Owner: Thomas M. Brooks.

**AQUIFER.**--Middle Potomac aquifer of Cretaceous age.

**WELL CHARACTERISTICS.**--Drilled withdrawal water well, diameter 6 in., depth 305 ft, screened 285 to 305 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by USGS personnel.

**DATUM.**--Elevation of land-surface datum is 115 ft above sea level, from topographic map. Measuring point: Top of casing, 1.3 ft above land-surface datum.

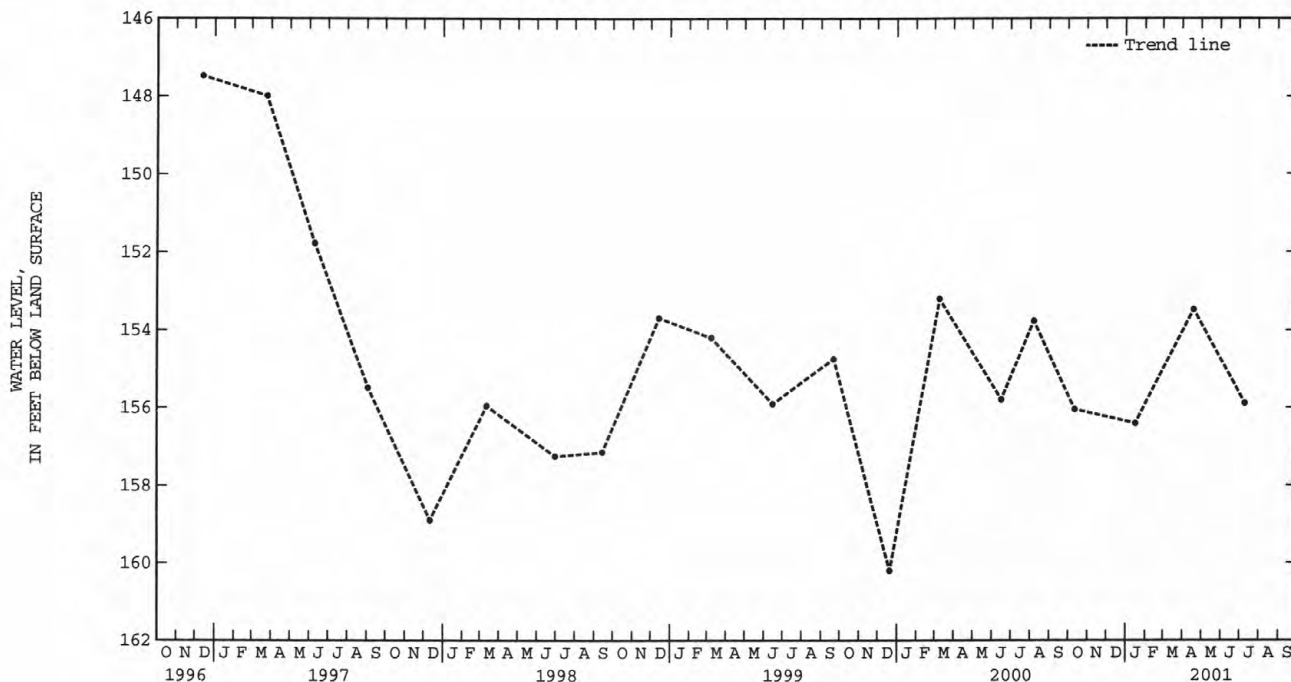
**REMARKS.**--Water level affected by regional drawdown.

**PERIOD OF RECORD.**--November 1983 to current year. Unpublished records available prior to October 1987 in files of the Geological Survey.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 129.91 ft below land-surface datum, Feb. 3, 1984; lowest measured, 160.20 ft below land-surface datum, Dec. 20, 1999.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 11	156.05	JAN 16	156.41	APR 19	153.47	JUL 10	155.89
WATER YEAR 2001		HIGHEST	153.47	APR 19, 2001		LOWEST	156.41
							JAN 16, 2001



## GROUND-WATER LEVELS

175

## NEW KENT COUNTY

373024076542201. Local number, 55J 6.

**LOCATION.**--Lat 37°30'24", long 76°54'21", NAD83, Hydrologic Unit 02080106, 0.25 mi north of State Highway 249, 4.3 mi east of New Kent Courthouse. Owner: Chad Brunskole.

**AQUIFER.**--Aquia aquifer of Paleocene age.

**WELL CHARACTERISTICS.**--Drilled withdrawal water well, diameter 4 in., depth 275 ft, screened 265 to 275 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by USGS personnel.

**DATUM.**--Elevation of land-surface datum is 110 ft above sea level, from topographic map. Measuring point: Top of casing, 1.38 ft above land-surface datum.

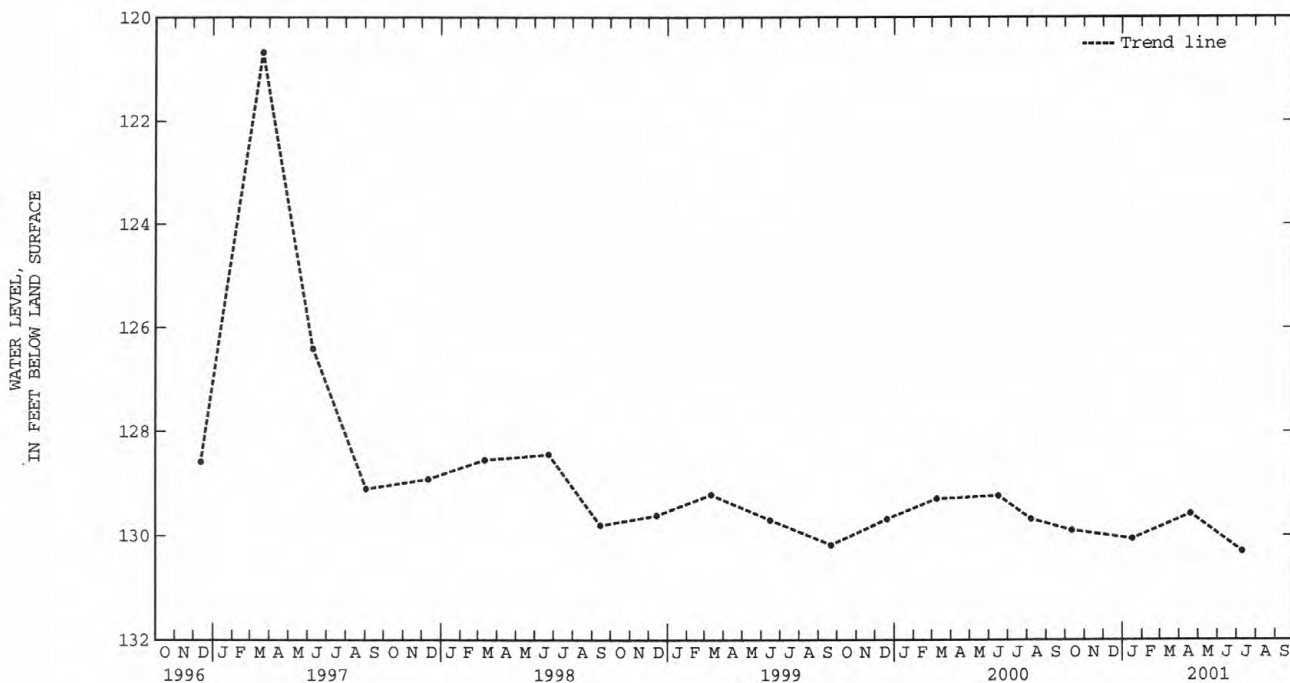
**REMARKS.**--Water level affected by regional drawdown.

**PERIOD OF RECORD.**--December 1972, April 1984 to March 1986, March 1988 to current year. Unpublished records available prior to October 1987 in files of the Geological Survey.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 114.10 ft below land-surface datum, Dec. 7, 1972; lowest measured, 130.30 ft below land-surface datum, Jul. 20, 2001.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 11	129.90	JAN 16	130.06	APR 19	129.57	JUL 10	130.30
WATER YEAR 2001		HIGHEST	129.58	APR 19, 2001	LOWEST	130.30	JUL 10, 2001



## GROUND-WATER LEVELS

## CITY OF NEWPORT NEWS

371027076335601. Local number, 58F 1 SOW 002.

**LOCATION.**--Lat 37°10'28", long 76°33'55", NAD83, Hydrologic Unit 02080206, on shore of Lee Hall Reservoir, 0.15 mi north of intersection of State Highway 105 and U.S. Highway 60, and 0.65 mi northeast of Fort Eustis in Newport News. Owner: City of Newport News.

**AQUIFER.**--Brightseat-upper Potomac aquifer of Cretaceous-Paleocene age.

**WELL CHARACTERISTICS.**--Drilled unused water well, diameter 10 in. to 431.3 ft, diameter 8 in. from 431.3 to 443 ft, diameter 6 in. from 443 to 497 ft, depth 497 ft, screened 476 to 493 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to July 10, 1995, bimonthly measurement with chalked tape. Prior to Oct. 1, 1985, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 20 ft above sea level, from topographic map. Measuring point: Top of recorder shelf, 2.3 ft above land-surface datum.

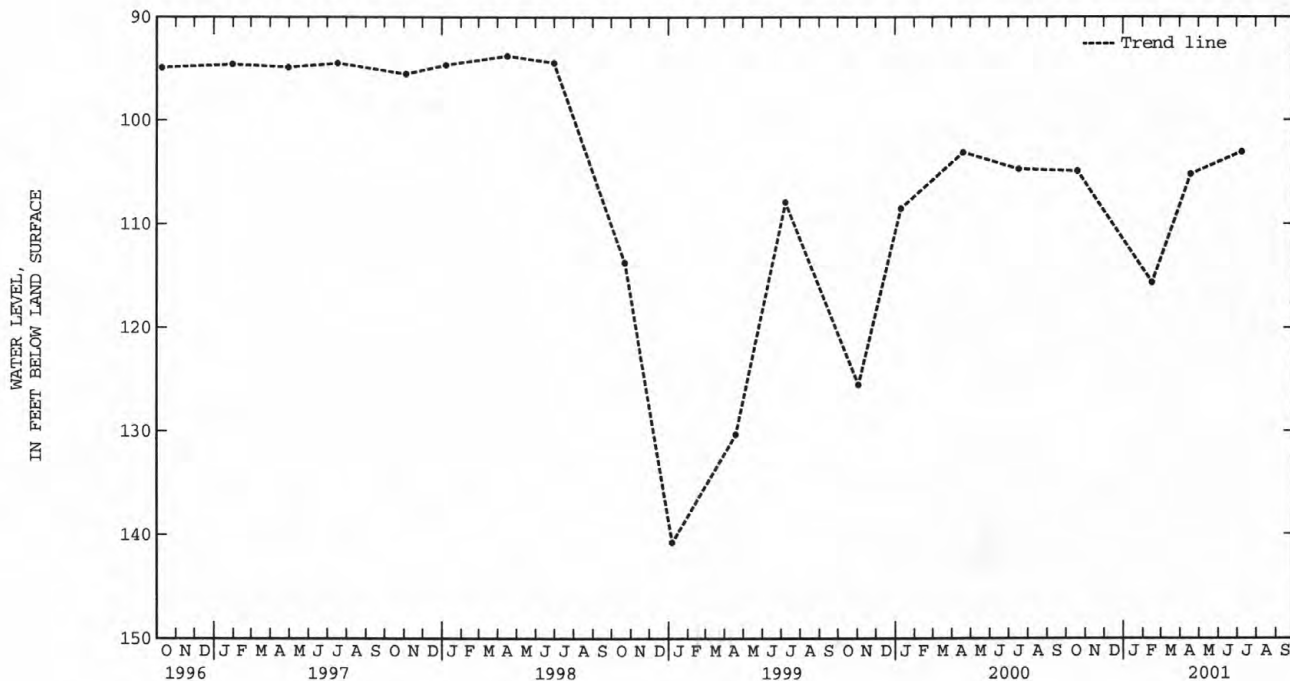
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage and regional drawdown. Water from this well is known to contain concentrations of dissolved solids greater than 1,000 mg/L.

**PERIOD OF RECORD.**--January 1968 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 54.76 ft below land-surface datum, May 10, 1969; lowest measured, 140.75 ft below land-surface datum, Jan. 6, 1999.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 19	104.91	FEB 15	115.64	APR 18	105.20	JUL 09	103.07
WATER YEAR 2001		HIGHEST	103.07	JUL 09, 2001		LOWEST	115.64
							FEB 15, 2001





## GROUND-WATER LEVELS

177

## CITY OF NEWPORT NEWS

371208076341101. Local number, 58F 50 SOW 171A.

**LOCATION.**--Lat 37°12'09", long 76°34'10", NAD83, Hydrologic Unit 02080206, 0.4 mi southeast of the intersection of State Highways 143 and 238 and 150 ft north of State Highway 143 in the city of Newport News. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Lower Potomac aquifer of Cretaceous age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 1,236 ft, screened 1,205 to 1,215 ft.

**INSTRUMENTATION.**--Electronic pressure transducer data logger 60-minute record interval. Prior to May 8, 1997, digital recorder 60-minute punch.

**DATUM.**--Elevation of land-surface datum is 55 ft above sea level, from topographic map. Measuring point: Top of casing, 1.0 ft above land-surface datum prior to Apr. 14, 1993; 1.85 ft thereafter.

**REMARKS.**--Missing record due to recorder malfunction. Water level affected by regional drawdown, nearby pumpage, and occasional pumpage for water-quality sampling. Water from this well is known to contain concentrations of dissolved solids greater than 1,000 mg/L.

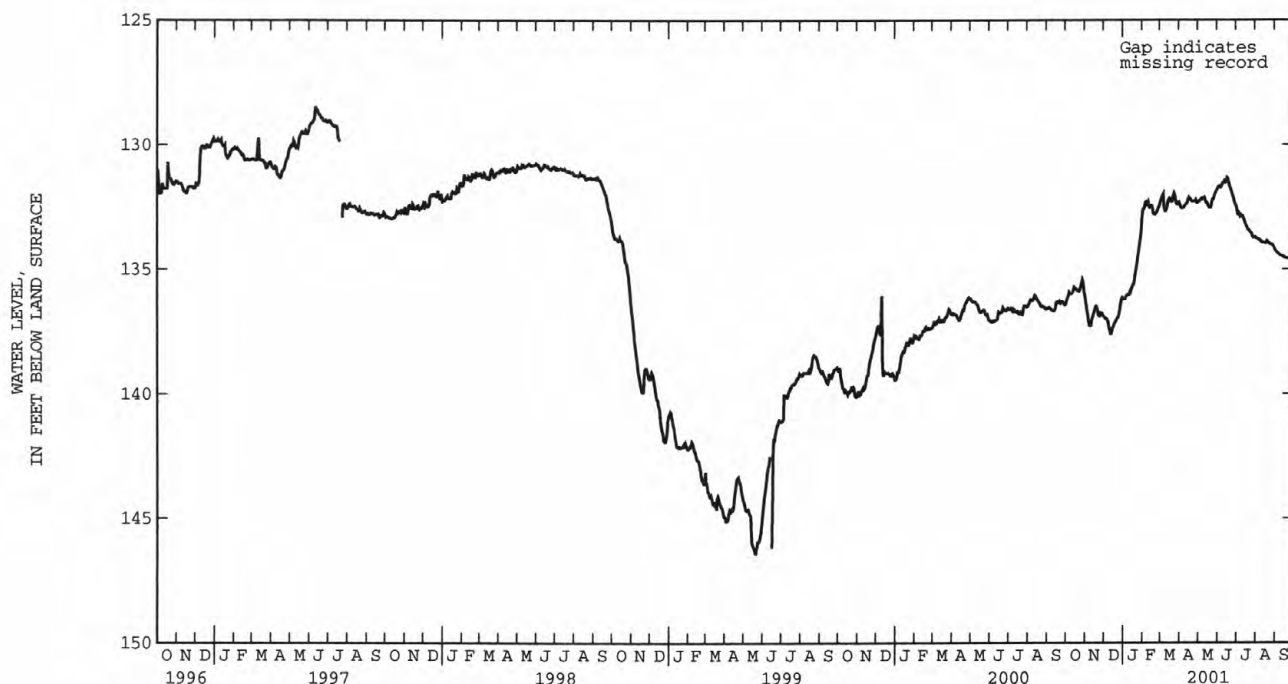
**PERIOD OF RECORD.**--July 1984 to current year. Unpublished records available prior to October 1986 in files of the Geological Survey.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level recorded, 106.32 ft below land-surface datum, May 23-27, 1996; lowest recorded, 146.42 ft below land-surface datum, May 21, 1999.

**EXTREMES FOR CURRENT YEAR.**--Highest instantaneous water level, 131.16 ft below land-surface datum, Jun. 17; lowest instantaneous water level, 137.61 ft below land-surface datum, Dec. 19.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	136.12	136.72	136.99	136.18	132.51	132.12	132.55	132.24	131.68	132.81	133.79	134.32
10	135.99	137.28	137.42	136.03	132.36	132.67	132.46	132.14	131.55	132.87	133.88	134.43
15	135.73	136.79	137.37	135.78	132.50	132.25	132.28	132.34	131.52	133.08	133.95	134.50
20	135.86	136.51	137.11	135.37	132.79	132.30	132.22	132.53	131.58	133.40	133.87	134.57
25	135.75	136.88	136.88	134.53	132.70	132.03	132.28	132.21	131.96	133.54	133.99	134.55
EOM	135.94	136.86	136.14	133.33	132.49	132.33	132.34	131.86	132.39	133.70	134.11	134.58



## GROUND-WATER LEVELS

## CITY OF NEWPORT NEWS

371208076341102. Local number, 58F 51 SOW 171B.

**LOCATION.**--Lat 37°12'09", long 76°34'10", NAD83, Hydrologic Unit 02080206, 0.4 mi southeast of the intersection of State Highways 143 and 238 and 150 ft north of State Highway 143 in the city of Newport News. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Middle Potomac aquifer of Cretaceous age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 851 ft, screened 820 to 830 ft.

**INSTRUMENTATION.**--Electronic pressure transducer data logger 60-minute record interval. Prior to Apr. 24, 1996, digital recorder 60-minute punch.

**DATUM.**--Elevation of land-surface datum is 55 ft above sea level, from topographic map. Measuring point: Top of casing, 1.0 ft above land-surface datum prior to Apr. 14, 1993; 1.80 ft thereafter.

**REMARKS.**--Missing record due to recorder malfunction. Water level affected by regional drawdown, nearby pumpage, and occasional pumpage for water-quality sampling. Water from this well is known to contain concentrations of dissolved solids greater than 1,000 mg/L.

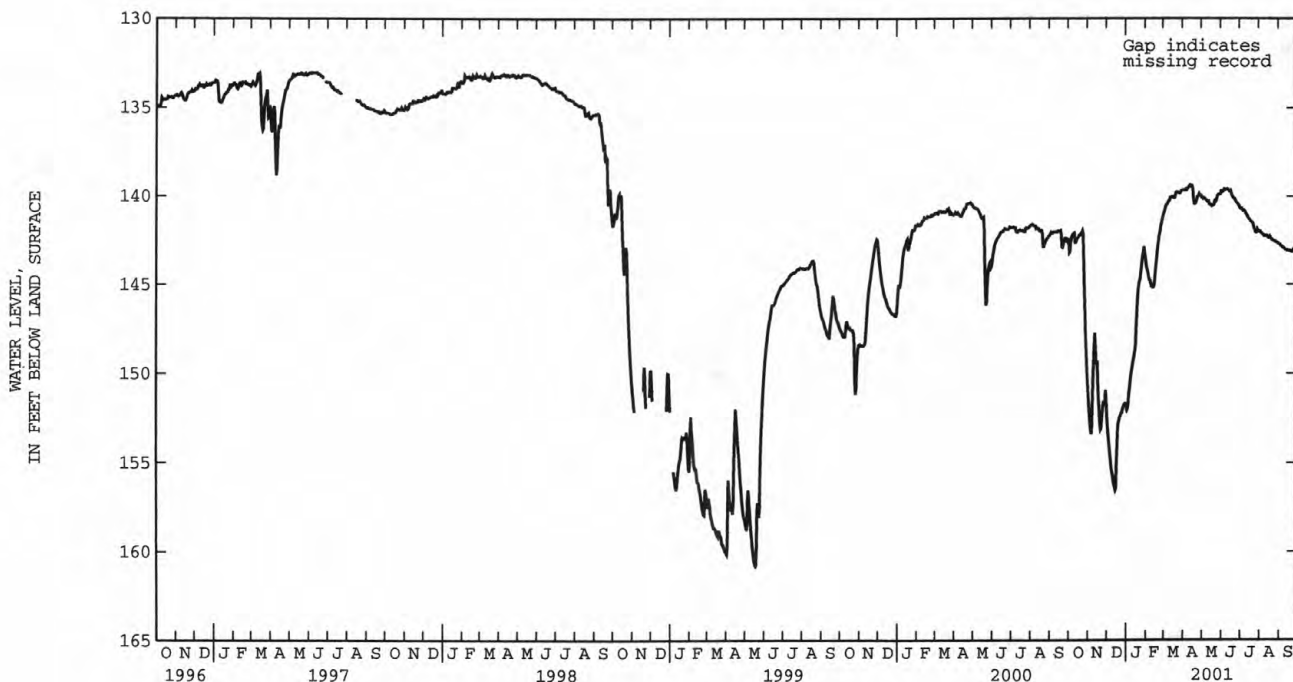
**PERIOD OF RECORD.**--July 1984 to current year. Unpublished records available prior to October 1986 in files of the Geological Survey.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level recorded, 126.35 ft below land-surface datum, Mar. 23-25, 1985; lowest recorded, 160.80 ft below land-surface datum, May 18, 1999.

**EXTREMES FOR CURRENT YEAR.**--Highest instantaneous water level, 139.25 ft below land-surface datum, Apr. 16; lowest instantaneous water level, 156.55 ft below land-surface datum, Dec. 15.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	142.69	152.64	153.82	151.68	144.26	140.66	139.67	140.08	139.73	140.68	142.08	142.80
10	142.11	150.53	155.57	149.95	144.96	140.30	139.54	140.24	139.60	140.84	142.25	142.93
15	142.43	149.43	156.55	148.88	145.08	140.06	139.47	140.45	139.71	141.19	142.29	143.07
20	142.23	152.05	152.78	145.81	143.20	140.09	140.43	140.50	140.00	141.43	142.35	143.09
25	142.15	152.15	152.20	144.31	141.94	139.78	140.03	140.25	140.24	141.85	142.54	143.06
EOM	149.57	150.94	151.69	143.11	141.34	139.68	139.94	139.89	140.49	141.92	142.63	143.17



## 179

371208076341103. Local number, 58F 52 SOW 171C.

**AQUIFER.**--Brightseat-upper Potomac aquifer of Cretaceous-Paleocene age.

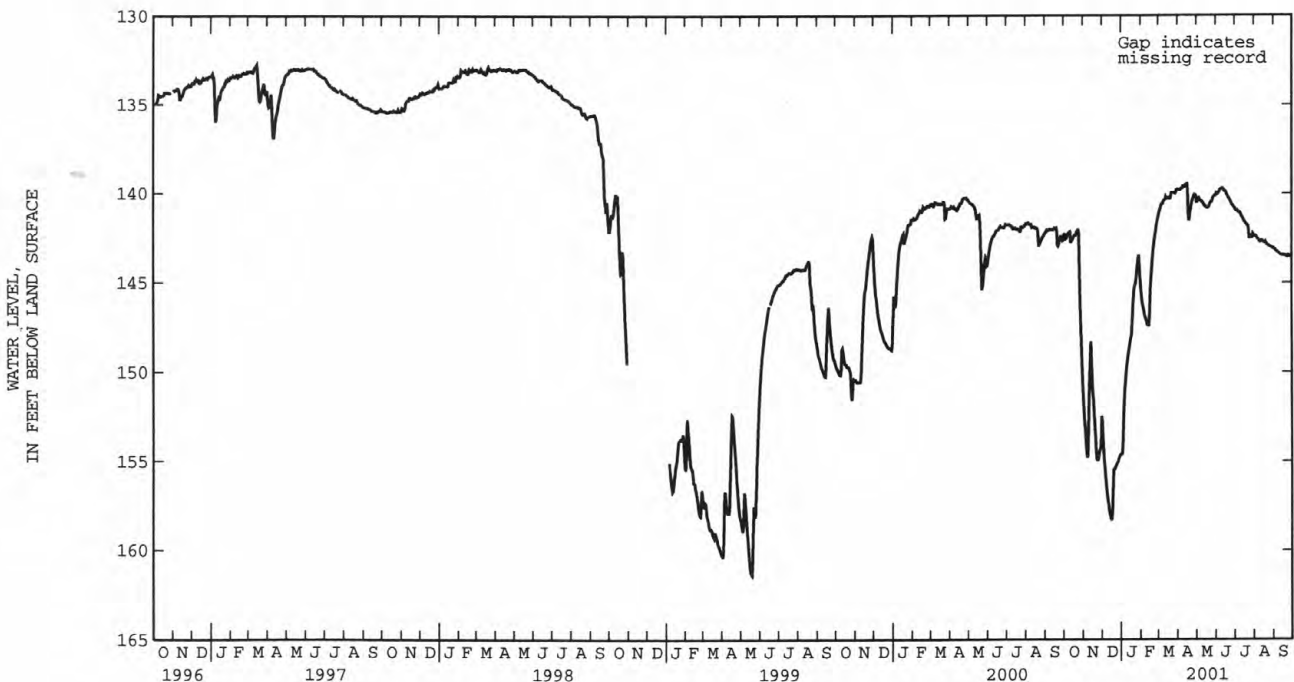
**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 537 ft, screened 527 to 537 ft.

**DATUM.**--Elevation of land-surface datum is 55 ft above sea level, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum prior to Apr. 14, 1993; 3.1 ft thereafter.

PERIOD OF RECORD.--June 1984 to current year. Unpublished records available prior to October 1986 in files of the Geological Survey.

**EXTREMES FOR CURRENT YEAR.**--Highest instantaneous water level, 139.40 ft below land-surface datum, Apr. 15-16; lowest instantaneous water level, 158.28 ft below land-surface datum, Dec. 15-16.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	142.52	154.01	155.39	151.96	146.41	140.73	139.81	140.28	139.96	140.95	142.46	143.22
10	142.17	151.53	157.27	149.54	147.19	140.41	139.68	140.49	139.73	141.13	142.71	143.36
15	142.56	150.58	158.28	148.31	146.79	140.29	139.49	140.71	139.86	141.49	142.70	143.47
20	142.34	153.60	155.46	146.11	143.56	140.30	141.37	140.79	140.19	141.75	142.77	143.48
25	142.25	154.85	155.11	144.62	142.12	139.96	140.35	140.46	140.52	142.48	142.96	143.47
EOM	150.74	152.51	154.63	144.72	141.46	139.81	140.14	140.13	140.79	142.33	143.05	143.54



## GROUND-WATER LEVELS

## CITY OF NEWPORT NEWS

371208076341104. Local number, 58F 53 SOW 171D.

**LOCATION.**--Lat 37°12'09", long 76°34'10", NAD83, Hydrologic Unit 02080206, 0.4 mi southeast of the intersection of State Highways 143 and 238 and 150 ft north of State Highway 143 in the city of Newport News. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Chickahominy-Piney Point aquifer of Eocene-Oligocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 343 ft, screened 333 to 343 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by USGS personnel. Prior to Oct. 1, 1999, digital recorder 60-minute punch.

**DATUM.**--Elevation of land-surface datum is 55 ft above sea level, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum prior to Apr. 14, 1993; 2.9 ft thereafter.

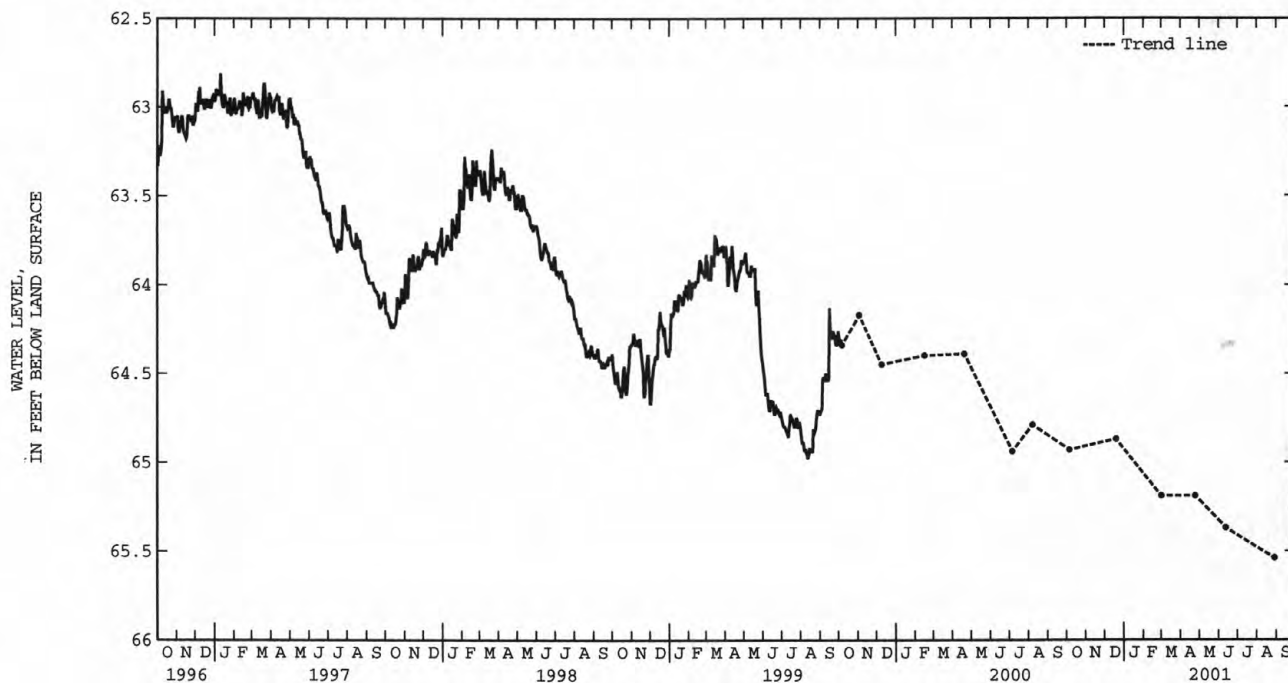
**REMARKS.**--Missing record due to recorder malfunction. Water level affected by regional drawdown and occasional pumpage for water-quality sampling. Water from this well is known to contain concentrations of dissolved solids greater than 1,000 mg/L.

**PERIOD OF RECORD.**--July 1984 to current year. Unpublished records available prior to October 1986 in files of the Geological Survey.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level recorded, 55.18 ft below land-surface datum, Feb. 2, 1985; lowest recorded, 65.54 ft below land-surface datum, Aug. 29, 2001.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05	64.93	DEC 19	64.87	MAR 01	65.19	APR 24	65.19	JUN 12	65.37	AUG 29	65.54
WATER YEAR 2001		HIGHEST	64.87	DEC 19, 2000	LOWEST	65.54	AUG 29, 2001				



## GROUND-WATER LEVELS

181

## CITY OF NEWPORT NEWS

371208076341105. Local number, 58F 54 SOW 171E.

**LOCATION.**--Lat 37°12'09", long 76°34'10", NAD83, Hydrologic Unit 02080206, 0.4 mi southeast of the intersection of State Highways 143 and 238 and 150 ft north of State Highway 143 in the city of Newport News. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Yorktown confining unit of Pliocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 88 ft, screened 78 to 88 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by USGS personnel. Prior to Oct. 1, 1999, digital recorder 60-minute punch. Digital recorder was removed from Oct. 18, 1991 to Jul. 8, 1992. During this period, occasional measurements with chalked tape.

**DATUM.**--Elevation of land-surface datum is 55 ft above sea level, from topographic map. Measuring point: Top of casing, 1.0 ft above land-surface datum prior to Jul. 8, 1992; 1.6 ft thereafter.

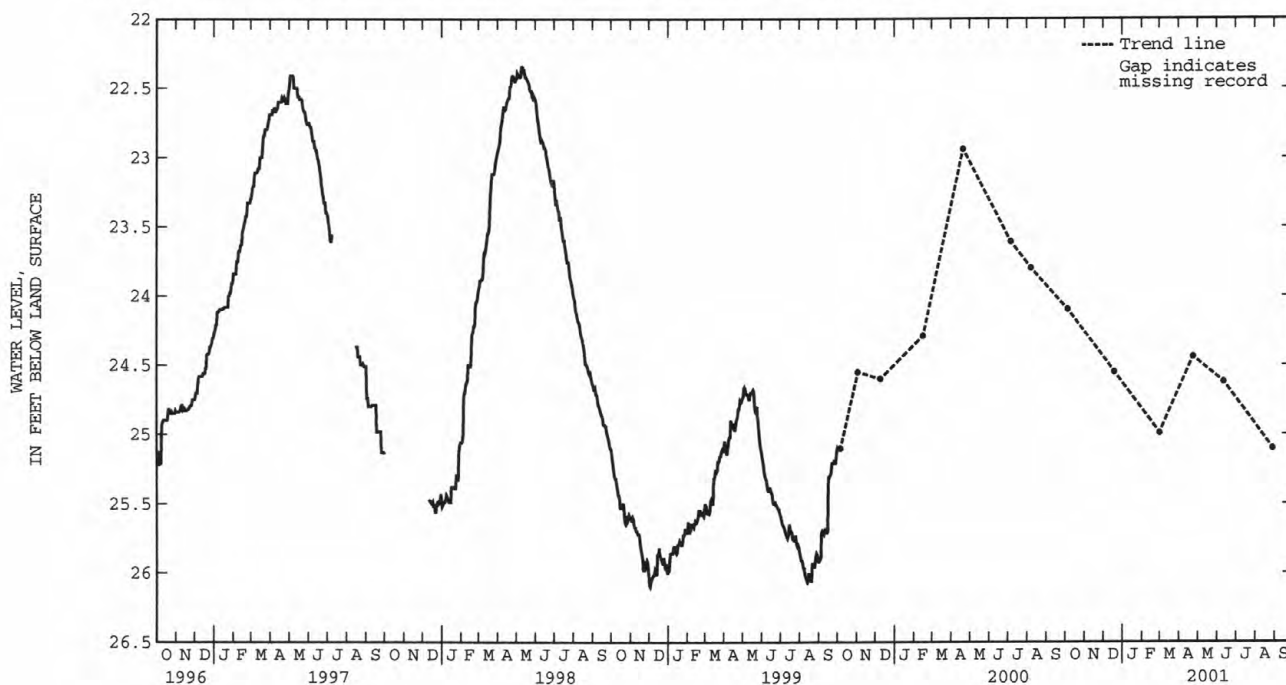
**REMARKS.**--Missing record due to recorder malfunction. Water level affected by occasional pumpage for water-quality sampling. Occasional stepping in hydrograph due to well not being plum and float rubbing the side of the casing.

**PERIOD OF RECORD.**--June 1984 to October 1991, July 1992 to current year. Unpublished records available prior to October 1986 in files of the Geological Survey.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level recorded, 22.05 ft below land-surface datum, May 20, 21, 1993; lowest recorded, 27.34 ft below land-surface datum, Nov. 1, 1990.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05	24.10	DEC 19	24.55	MAR 01	24.99	APR 24	24.44	JUN 12	24.62	AUG 29	25.10
WATER YEAR 2001		HIGHEST	24.10	OCT 05, 2000	LOWEST	25.10	AUG 29, 2001				



## GROUND-WATER LEVELS

## CITY OF NEWPORT NEWS

371208076341106. Local number, 58F 55 SOW 171F.

**LOCATION.**--Lat 37°12'09", long 76°34'10", NAD83, Hydrologic Unit 02080206, 0.4 mi southeast of the intersection of State Highways 143 and 238 and 150 ft north of State Highway 143 in the city of Newport News. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Cornwallis Cave aquifer of Pliocene-Pleistocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 60 ft, screened 50 to 60 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by USGS personnel. Prior to Oct. 1, 1999, digital recorder 60-minute punch.

**DATUM.**--Elevation of land-surface datum is 55 ft above sea level, from topographic map. Measuring point: Top of casing, 2.9 ft above land-surface datum.

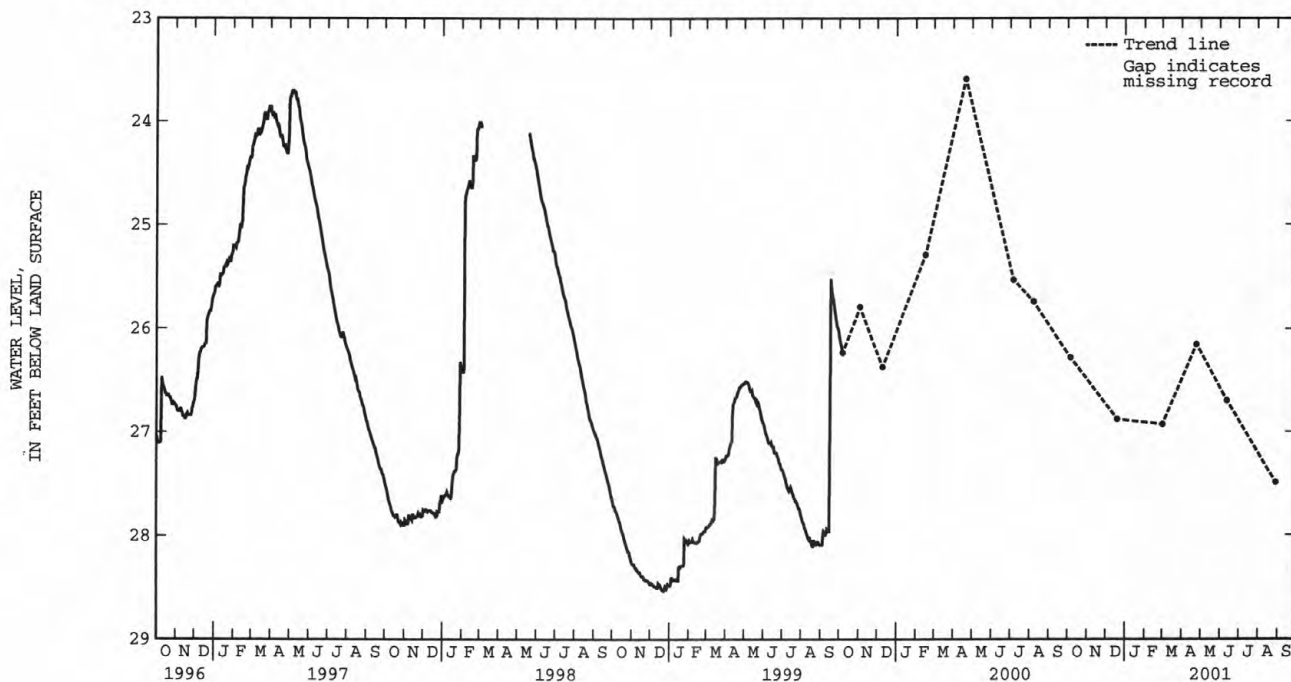
**REMARKS.**--Missing record due to recorder malfunction. Water level affected by occasional pumpage for water-quality sampling.

**PERIOD OF RECORD.**--June 1984 to current year. Unpublished records available prior to October 1986 in files of the Geological Survey.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level recorded, 23.04 ft below land-surface datum, May 21-24, 1993; lowest recorded, 29.12 ft below land-surface datum, Oct. 29, 1995.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05	26.28	DEC 19	26.88	MAR 01	26.93	APR 24	26.15	JUN 12	26.70	AUG 29	27.49
WATER YEAR 2001		HIGHEST	26.15	APR 24, 2001	LOWEST		27.49	AUG 29, 2001			





GROUND-WATER LEVELS

183

CITY OF NORFOLK

365223076122101. Local number, 61C 1.

**LOCATION.**--Lat 36°52'24", long 76°12'20", NAD83, Hydrologic Unit 02080108, at Moores Bridge Filter Plant, 0.3 mi east of intersection of State Highway 165 and U.S. Highway 13 in Norfolk. Owner: City of Norfolk.

**AQUIFER.**--Brightseat-upper Potomac aquifer of Cretaceous-Paleocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 6 in., depth 970 ft, screened 900 to 960 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by USGS personnel.

**DATUM.**--Elevation of land-surface datum is 10.80 ft above sea level. Measuring point: Inner edge of manhole at land-surface datum. Prior to Oct. 29, 1987, measuring point at top of casing, 3.15 ft above land-surface datum.

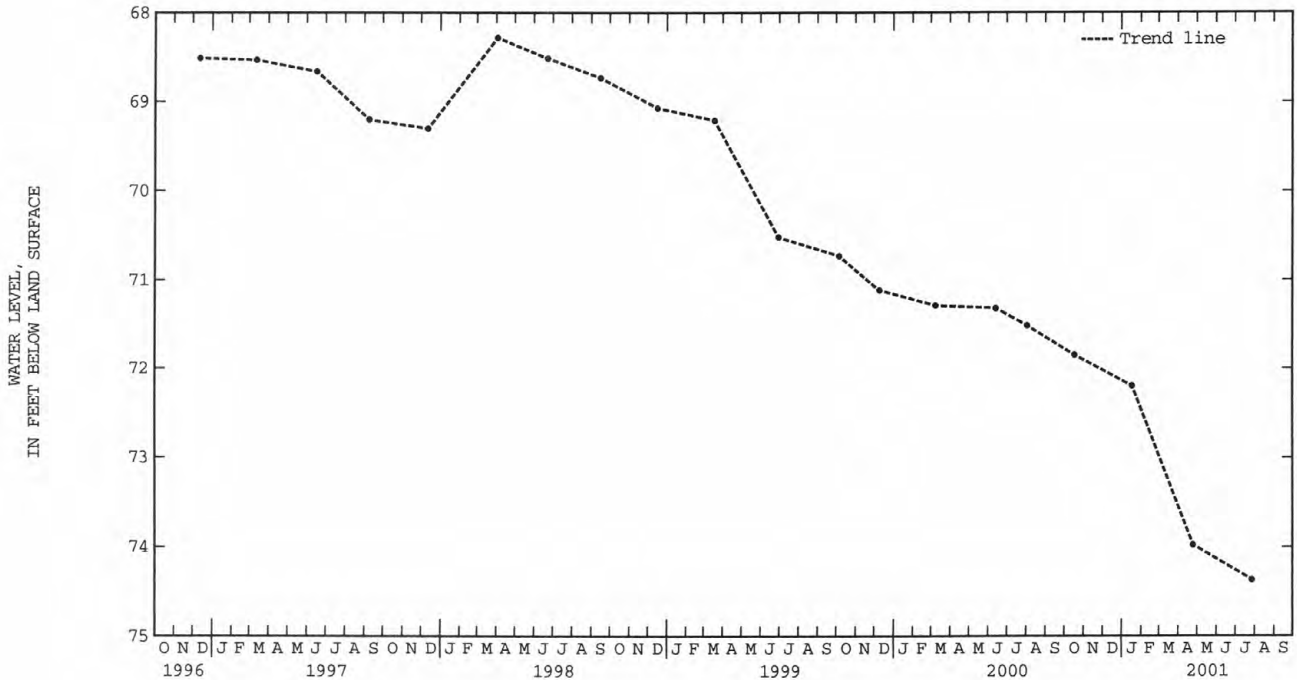
**REMARKS.**--Water level affected by local pumpage, regional drawdown, and recharge operations in nearby wells May 18, 1971, to Nov. 5, 1973.

**PERIOD OF RECORD.**--January 1968 to June 1990, September 1995 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 13.70 ft below land-surface datum, Feb. 17, 1968; lowest measured, 74.37 ft below land-surface datum, Jul. 27, 2001.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 17	71.85	JAN 17	72.20	APR 24	73.98	JUL 27	74.37
WATER YEAR 2001		HIGHEST	71.85	OCT 17, 2000	LOWEST	74.37	JUL 27, 2001



## GROUND-WATER LEVELS

## NORTHAMPTON COUNTY

371543076003401. Local number, 62G 15 SOW 121.

**LOCATION.**--Lat 37°15'43", long 76°00'33", NAD83, Hydrologic Unit 02080110, 100 ft southwest of State Highway 642, 0.5 mi south of intersection of State Highways 184 and 642, and 0.7 mi southeast of Cape Charles. Owner: Brown and Root Corporation.

**AQUIFER.**--Yorktown-Eastover aquifer of Miocene-Pliocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 190 ft, screened 180 to 190 ft.

**INSTRUMENTATION.**--Continuous strip-chart recorder. Prior to Jul. 15, 1985, occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel.

**DATUM.**--Elevation of land-surface datum is 12 ft above sea level, from topographic map. Measuring point: Top of recorder shelf, 1.5 ft above land-surface datum.

**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Missing record due to recorder malfunction. Water level affected by local pumpage.

**PERIOD OF RECORD.**--November 1980 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

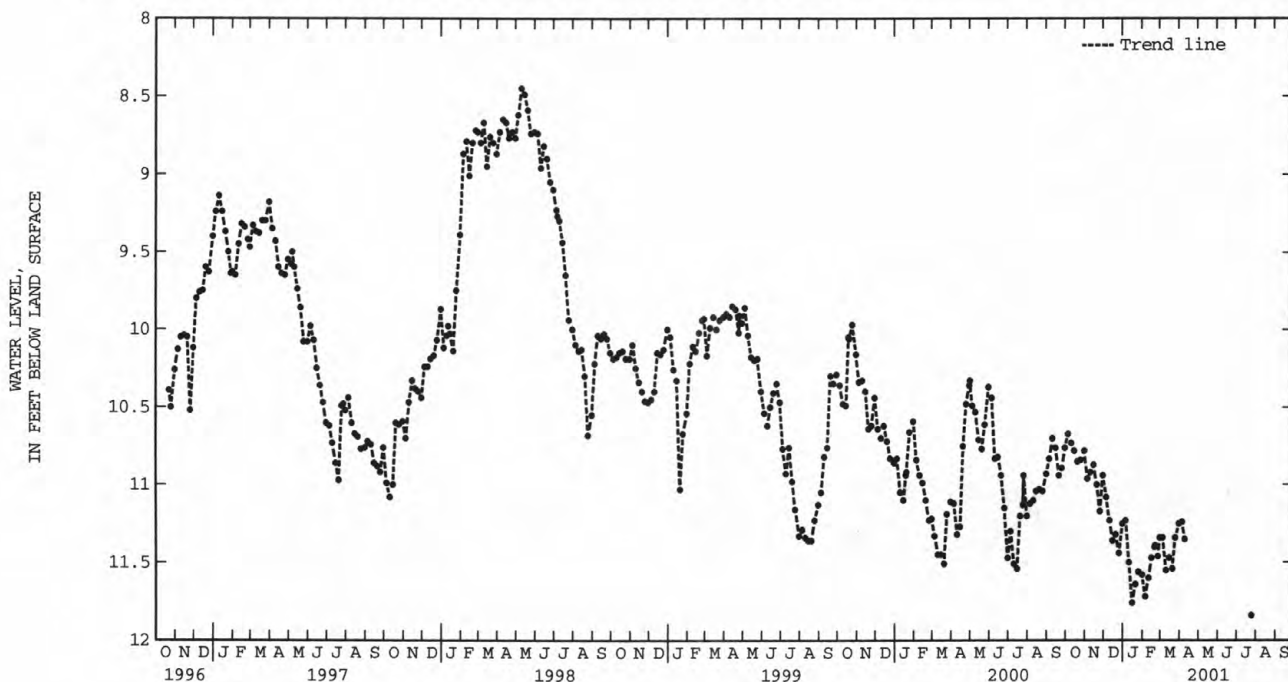
**EXTREMES FOR PERIOD OF RECORD.**--Highest water level recorded, 8.37 ft below land-surface datum, May 11, 12, 13, 1998; lowest recorded, 14.31 ft below land-surface datum, Jan. 16, 17, 1986.

**EXTREMES FOR CURRENT YEAR.**--Highest instantaneous water level, 10.63 ft below land-surface datum, Oct. 3; lowest instantaneous water level, 11.86 ft below land-surface datum, Jul. 16, 17.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	10.67	10.96	11.08	11.23	11.72	11.34	11.24	---	---	---	---	---
10	10.73	10.92	11.23	11.50	11.60	11.55	---	---	---	---	---	---
15	10.78	10.87	11.36	11.76	11.47	11.47	---	---	---	---	---	---
20	10.85	11.00	11.32	11.64	11.40	11.54	---	---	---	---	---	---
25	10.84	11.17	11.44	11.56	11.46	11.34	---	---	---	11.84	---	---
EOM	10.78	10.94	11.25	11.58	11.34	11.25	---	---	---	---	---	---

WATER YEAR 2001      HIGHEST    10.67    OCT 05, 2000      LOWEST    11.84    JUL 25, 2001



## GROUND-WATER LEVELS

185

## NORTHAMPTON COUNTY

371307075583501. Local number, 63F 15 SOW 105A.

**LOCATION.**--Lat 37°13'08", long 75°58'34", NAD83, Hydrologic Unit 02080109, 50 ft south of State Highway 644, 0.3 mi west of intersection of State Highway 644 and U.S. Highway 13, and 1.3 mi north of Cheapside. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Yorktown-Eastover aquifer of Miocene-Pliocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 130 ft, screened 120 to 130 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 5, 1985 to Oct. 24, 1995, continuous strip-chart recorder. Prior to Oct. 5, 1985, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 31.97 ft above sea level. Measuring point: Top of recorder shelf, 1.1 ft above land-surface datum prior to Jul. 21, 1987; 1.4 ft thereafter.

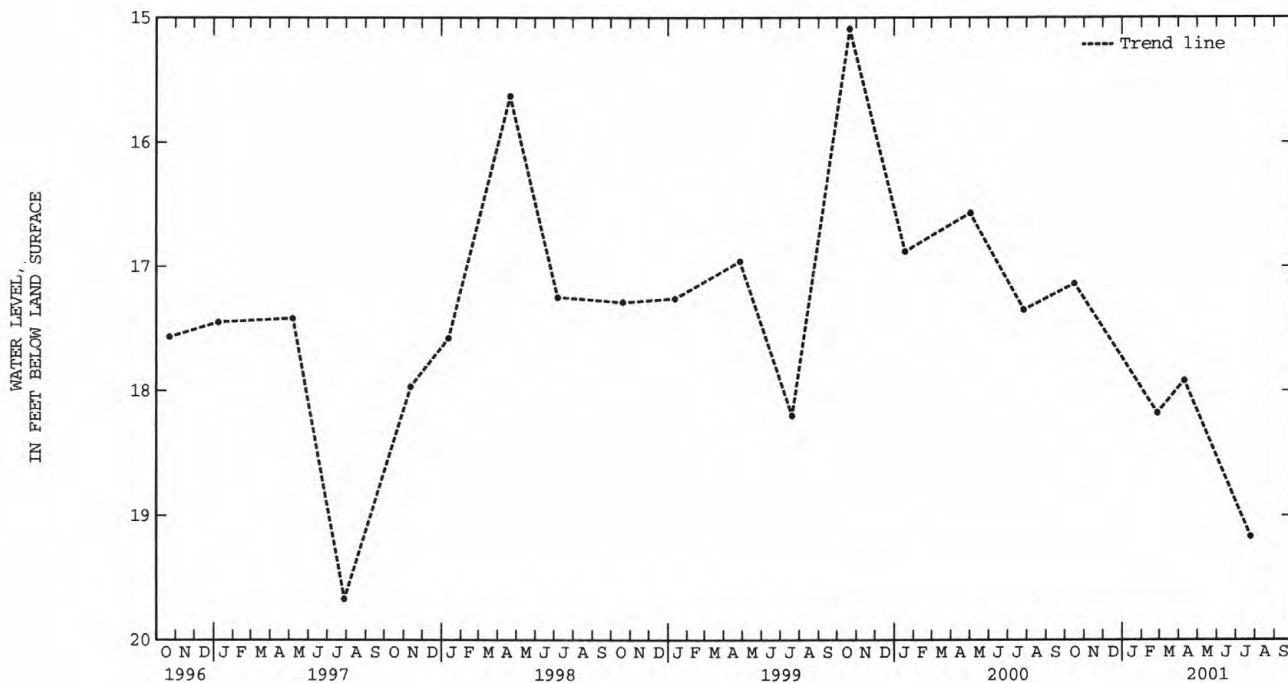
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Missing record due to recorder malfunction. Water level affected by local pumpage.

**PERIOD OF RECORD.**--June 1978 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 13.44 ft below land-surface datum, Apr. 12, 1982; lowest recorded, 24.62 ft below land-surface datum, Jun. 15, 1988.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16	17.14	FEB 26	18.18	APR 10	17.92	JUL 25	19.17
WATER YEAR 2001		HIGHEST	17.14	OCT 16, 2000	LOWEST	19.17	JUL 25, 2001



## GROUND-WATER LEVELS

## NORTHAMPTON COUNTY

371307075583502. Local number, 63F 16 SOW 105C.

**LOCATION.**--Lat 37°13'08", long 75°58'34", NAD83, Hydrologic Unit 02080109, 50 ft south of State Highway 644, 0.3 mi west of intersection of State Highway 644 and U.S. Highway 13, and 1.3 mi north of Cheapside. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Yorktown-Eastover aquifer of Miocene-Pliocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 285 ft, screened 275 to 285 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sep. 30, 1985, to Jul. 24, 1995, bimonthly measurement with chalked tape. Prior to Sep. 30, 1985, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 31.16 ft above sea level. Measuring point: Top of casing, 0.1 ft above land-surface datum prior to Mar. 1, 1994; 0.6 ft thereafter.

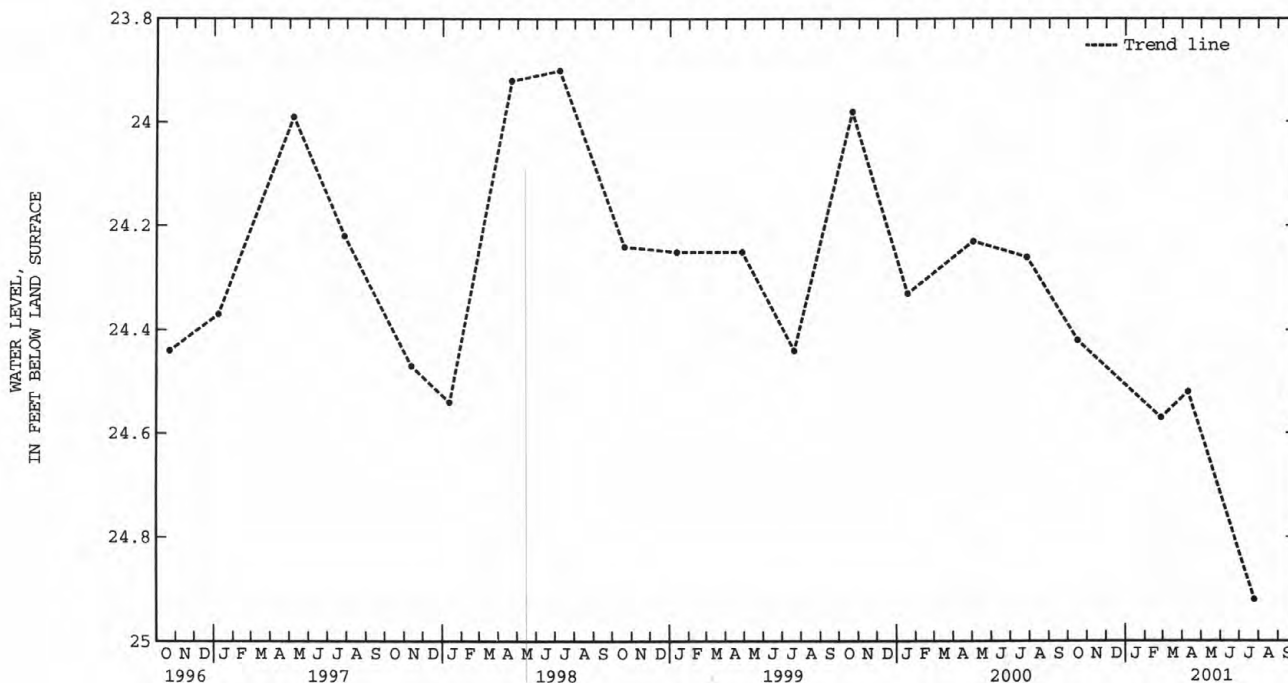
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division.

**PERIOD OF RECORD.**--June 1978 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 23.90 ft below land-surface datum, Jul. 7, 1998; lowest measured, 29.58 ft below land-surface datum, May 23, 1986.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16	24.42	FEB 26	24.57	APR 10	24.52	JUL 25	24.92
WATER YEAR 2001		HIGHEST	24.42	OCT 16, 2000	LOWEST	24.92	JUL 25, 2001



## GROUND-WATER LEVELS

187

## NORTHAMPTON COUNTY

371307075583503. Local number, 63F 17 SOW 105B.

**LOCATION.**--Lat 37°13'08", long 75°58'34", NAD83, Hydrologic Unit 02080109, 50 ft south of State Highway 644, 0.3 mi west of intersection of State Highway 644 and U.S. Highway 13, and 1.3 mi north of Cheapside. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Yorktown-Eastover aquifer of Miocene-Pliocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 196 ft, screened 186 to 196 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sep. 30, 1985, to Jul. 24, 1995, bimonthly measurement with chalked tape. Prior to Sep. 30, 1985, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 31.50 ft above sea level. Measuring point: Top of casing, 0.5 ft above land-surface datum, prior to Jul. 22, 1996. 1.0 ft thereafter.

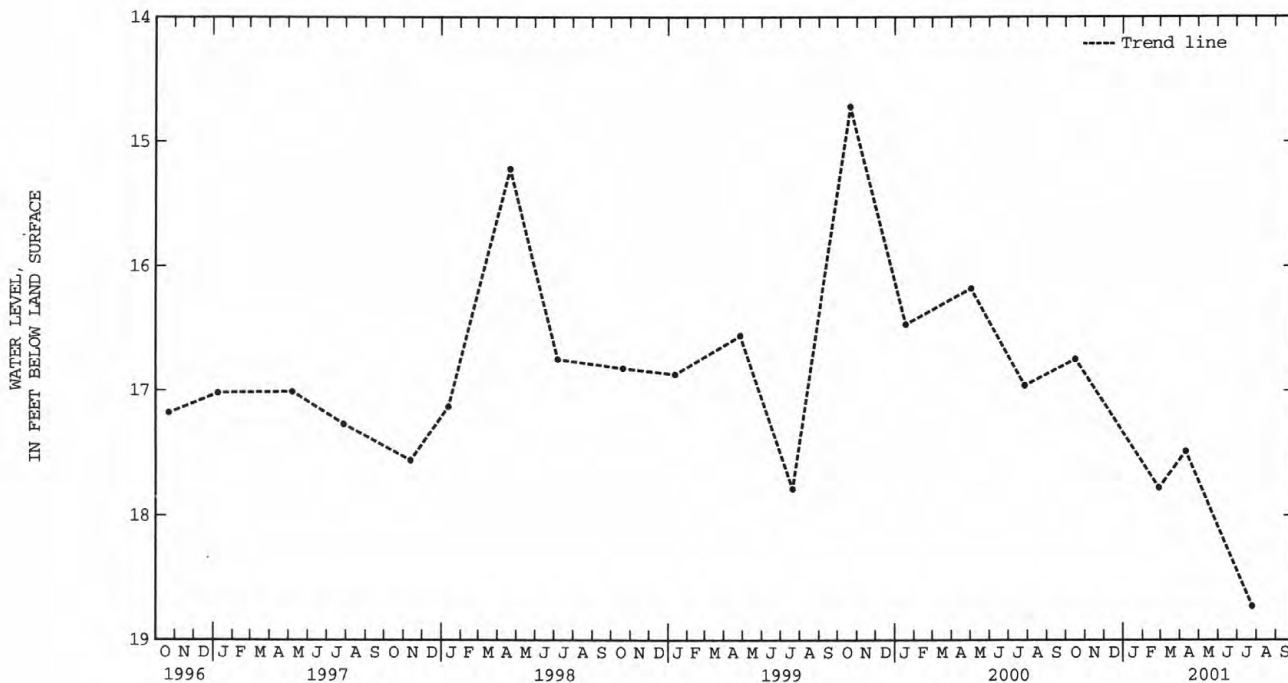
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

**PERIOD OF RECORD.**--June 1978 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 14.72 ft below land-surface datum, Oct. 21, 1999; lowest measured, 21.68 ft below land-surface datum, Feb. 11, 1982.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16	16.75	FEB 26	17.78	APR 10	17.49	JUL 25	18.73
WATER YEAR 2001		HIGHEST	16.75	OCT 16, 2000	LOWEST	18.73	JUL 25, 2001



## GROUND-WATER LEVELS

## NORTHAMPTON COUNTY

371307075583601. Local number, 63F 34.

**LOCATION.**--Lat 37°13'08", long 75°58'35", NAD83, Hydrologic Unit 02080109, 50 ft south of State Highway 644, 0.35 mi west of intersection of U.S. Highway 13 and State Highway 644, and 1.55 mi northwest of Capeville. Owner: U.S. Geological Survey.

**AQUIFER.**--Columbia aquifer of Quaternary age.

**WELL CHARACTERISTICS.**--Driven observation water well, diameter 2 in., depth 13 ft, screened 10 to 13 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Aug. 16 to Sep. 30, 1989, bimonthly measurement with chalked tape by USGS personnel. Jan. 22, 1988, to Aug. 16, 1989, digital recorder 60-minute punch. Prior to Jan. 22, 1988, bimonthly measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 31.15 ft above sea level. Measuring point: Top of casing, 1.85 ft above land-surface datum.

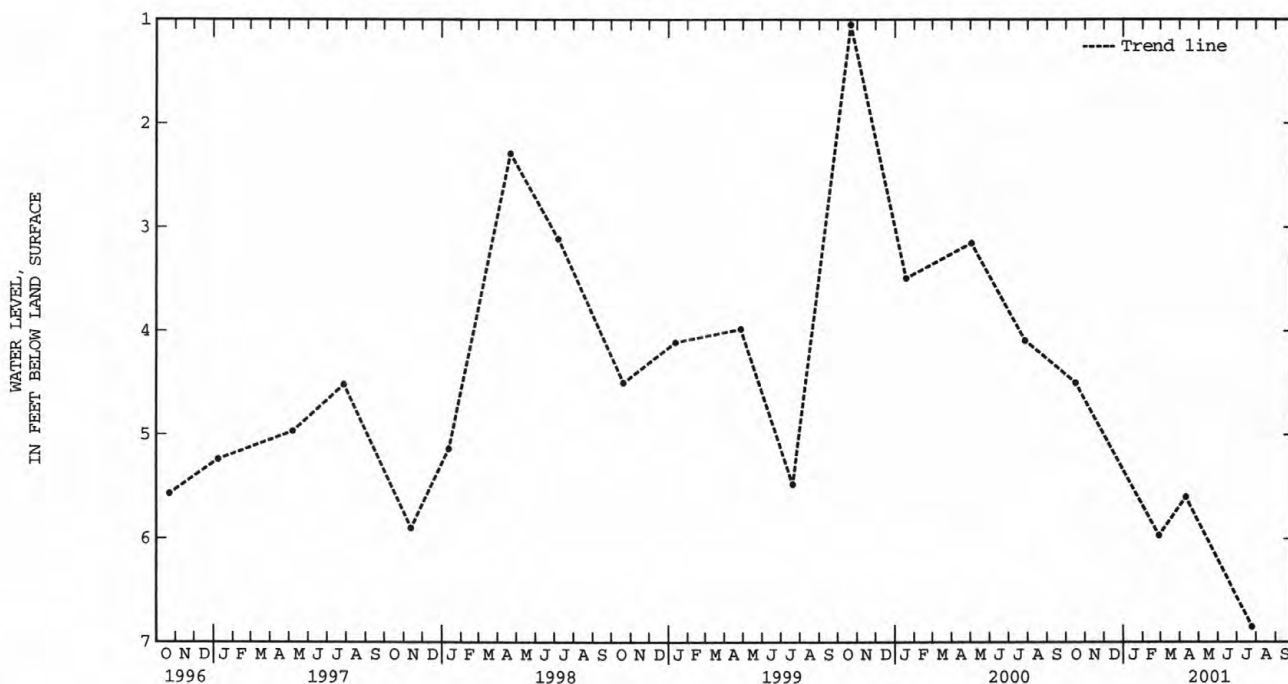
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division.

**PERIOD OF RECORD.**--September 1987 to current year. Unpublished records available prior to October 1987 in files of the U.S. Geological Survey.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 1.05 ft below land-surface datum, Oct. 21, 1999; lowest measured, 9.08 ft below land-surface datum, Feb. 4, 5, 1989.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16	4.50	FEB 26	5.97	APR 10	5.60	JUL 25	6.85
WATER YEAR 2001	HIGHEST	4.50	OCT 16, 2000	LOWEST	6.85	JUL 25, 2001	





## GROUND-WATER LEVELS

189

## NORTHAMPTON COUNTY

370807075570802. Local number, 63F 51 SOW 182A

**LOCATION.**--Lat 37°08'08", long 75°57'07", NAD83, Hydrologic Unit 02080110, at Kiptopeke Wildlife Refuge, 0.6 mi southeast of State Highway 600, 0.8 mi southeast of Kiptopeke, and 0.9 mi southeast of intersection of State Highway 600 and U.S. Highway 13. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Middle Potomac aquifer of Cretaceous age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 1,730 ft, screened 1,720 to 1,730 ft.

**INSTRUMENTATION.**--Occasional measurement with manometer and/or chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to Jul. 24, 1995, bimonthly measurement with manometer and/or chalked tape.

**DATUM.**--Elevation of land-surface datum is 10 ft above sea level, from topographic map. Measuring point: Top of casing, 1.2 ft above land-surface datum.

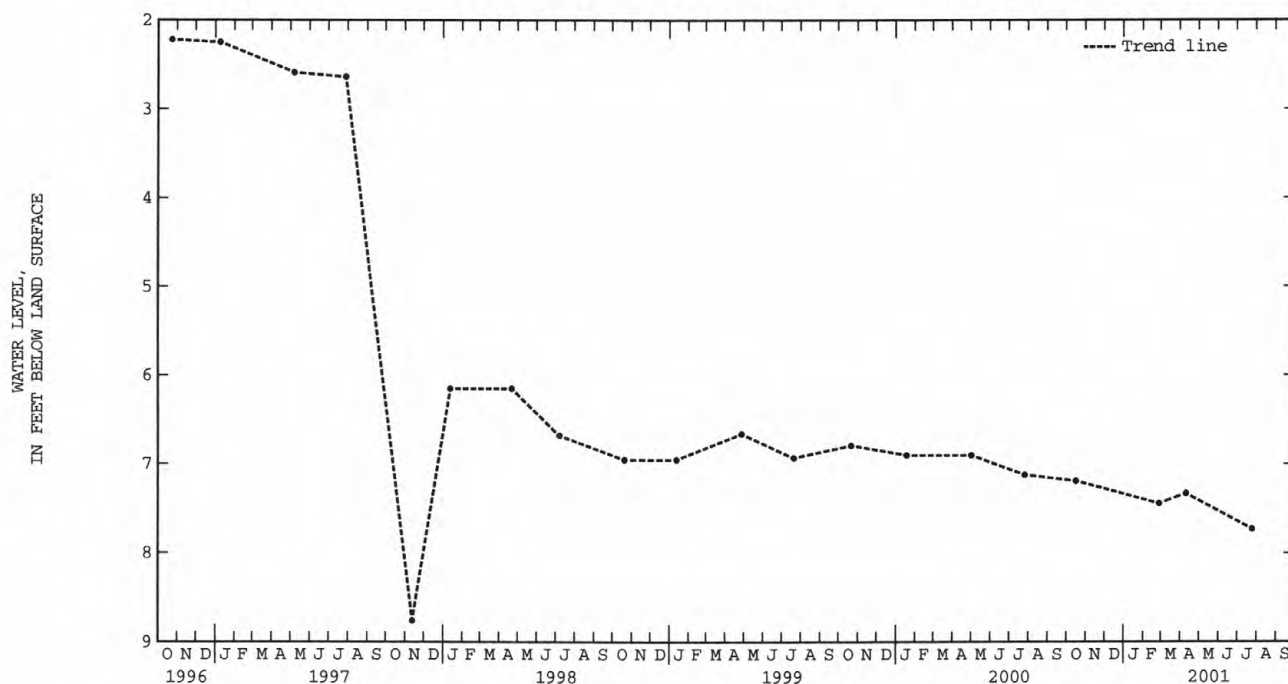
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by occasional pumpage for water-quality sampling. Cause of nonrecovery to pre-pumpage level after November 1997 unknown.

**PERIOD OF RECORD.**--May 1990 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 1.35 ft above land-surface datum, May 7, 1990; lowest measured, 8.76 ft below land-surface datum, Nov. 12, 1997.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16	7.19	FEB 26	7.44	APR 10	7.33	JUL 25	7.73
WATER YEAR 2001		HIGHEST	7.19	OCT 16, 2000	LOWEST	7.73	JUL 25, 2001



## GROUND-WATER LEVELS

## NORTHAMPTON COUNTY

370807075570803. Local number, 63F 52 SOW 182B.

**LOCATION.**--Lat 37°08'08", long 75°57'07", NAD83, Hydrologic Unit 02080110, at Kiptopeke Wildlife Refuge, 0.6 mi southeast of State Highway 600, 0.8 mi southeast of Kiptopeke, and 0.9 mi southeast of intersection of State Highway 600 and U.S. Highway 13. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Brightseat-upper Potomac aquifer of Cretaceous-Paleocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in. to 1,040 ft, diameter 2 in. from 1,040 to 1,320 ft, depth 1,320 ft, screened 1,300 to 1,320 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to July 24, 1995, bimonthly measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 10 ft above sea level, from topographic map. Measuring point: Top of casing, 1.3 ft above land-surface datum.

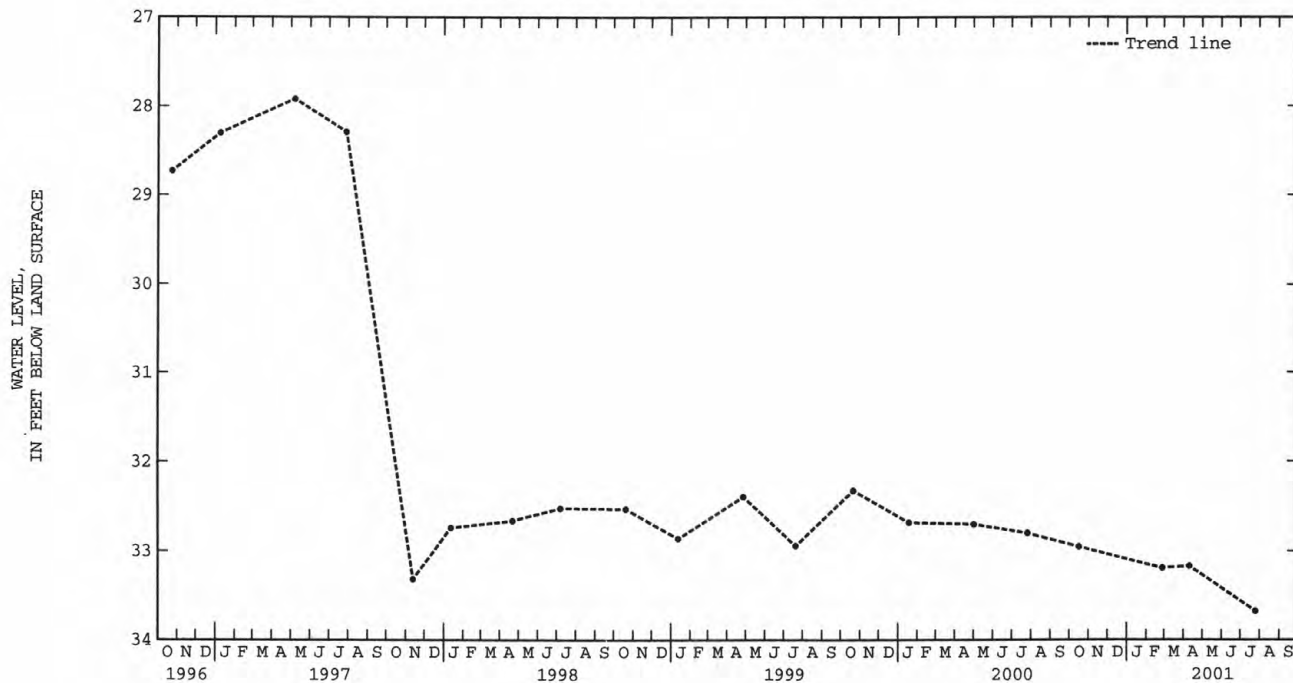
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by occasional pumpage for water-quality sampling. Cause of nonrecovery to pre-pumpage level after November 1997 unknown. Water from this well is known to contain concentrations of dissolved solids greater than 1,000 mg/L.

**PERIOD OF RECORD.**--May 1990 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 26.12 ft below land-surface datum, Dec. 3, 1990; lowest measured, 33.68 ft below land-surface datum, Jul. 25, 2001.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16	32.95	FEB 26	33.19	APR 10	33.17	JUL 25	33.68
WATER YEAR 2001		HIGHEST	32.95	OCT 16, 2000	LOWEST	33.68	JUL 25, 2001



## GROUND-WATER LEVELS

191

## NORTHAMPTON COUNTY

370807075570804. Local number, 63F 53 SOW 182C.

**LOCATION.**--Lat 37°08'08", long 75°57'07", NAD83, Hydrologic Unit 02080110, at Kiptopeke Wildlife Refuge, 0.6 mi southeast of State Highway 600, 0.8 mi southeast of Kiptopeke, and 0.9 mi southeast of intersection of State Highway 600 and U.S. Highway 13. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Yorktown-Eastover aquifer of Miocene-Pliocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in. to 188 ft, diameter 2 in. from 188 to 220 ft, depth 220 ft, screened 210 to 220 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel.

**DATUM.**--Elevation of land-surface datum is 10 ft above sea level, from topographic map. Measuring point: Top of casing, 1.4 ft above land-surface datum.

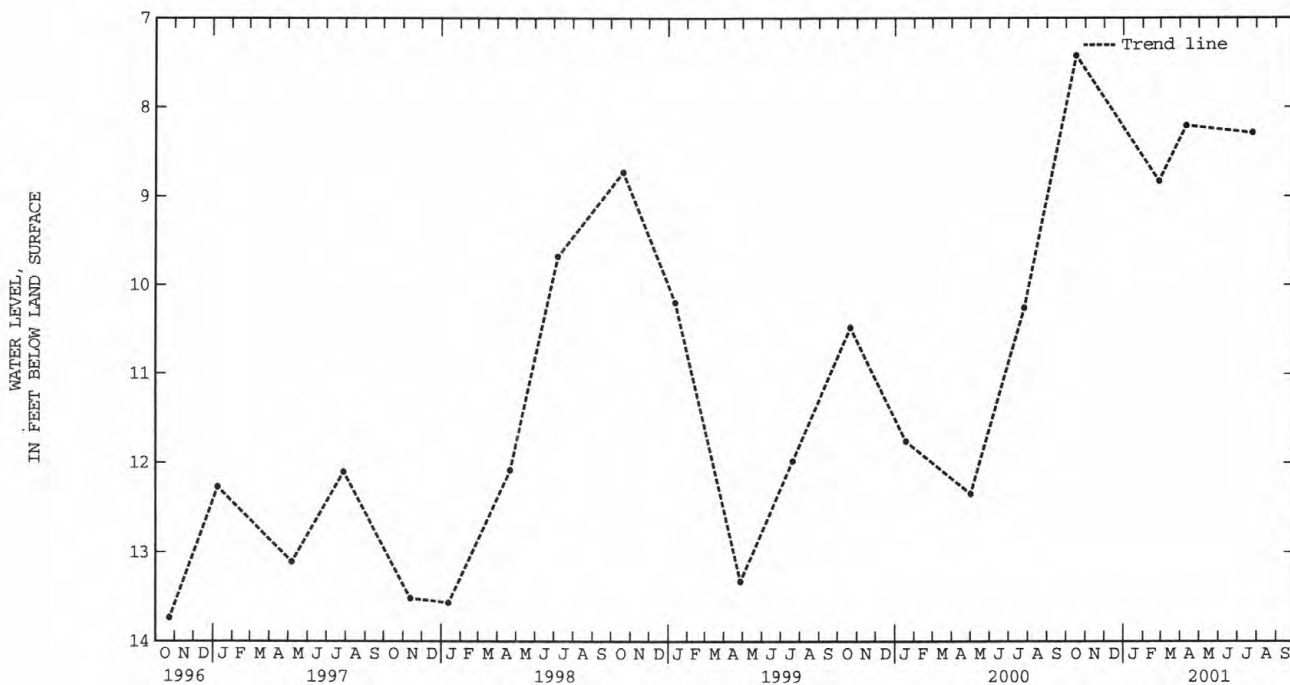
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

**PERIOD OF RECORD.**--May 1990 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 4.90 ft below land-surface datum, Jan. 22, 1991; lowest measured, 13.80 ft below land-surface datum, Apr. 11, 1996.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16	7.42	FEB 26	8.83	APR 10	8.21	JUL 25	8.29
WATER YEAR 2001		HIGHEST	7.42	OCT 16, 2000	LOWEST	8.83	FEB 26, 2001



## GROUND-WATER LEVELS

## NORTHAMPTON COUNTY

370807075570805. Local number, 63F 54 SOW 182D.

**LOCATION.**--Lat 37°08'08", long 75°57'07", NAD83, Hydrologic Unit 02080110, at Kiptopeke Wildlife Refuge, 0.6 mi southeast of State Highway 600, 0.8 mi southeast of Kiptopeke, and 0.9 mi southeast of intersection of State Highway 600 and U.S. Highway 13. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Yorktown-Eastover aquifer of Miocene-Pliocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4.5 in., depth 55 ft, screened 45 to 55 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to Jul. 24, 1995, bimonthly measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 10 ft above sea level, from topographic map. Measuring point: Top of casing, 1.3 ft above land-surface datum.

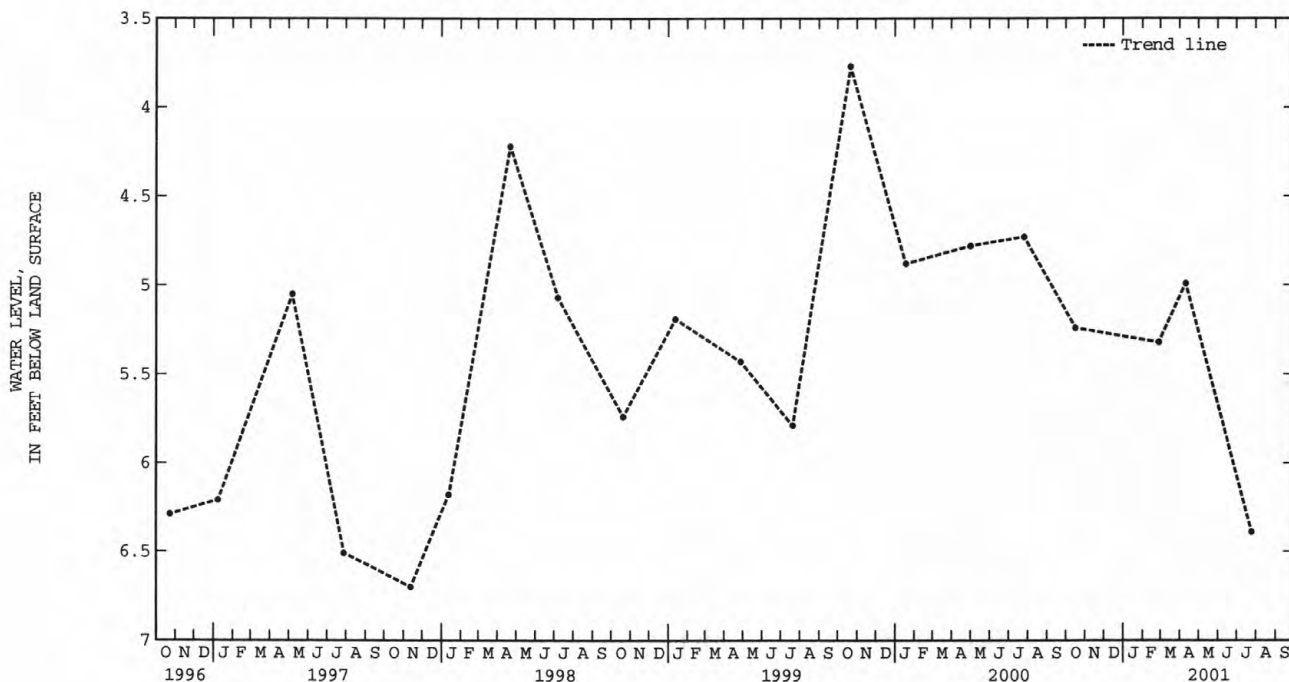
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division.

**PERIOD OF RECORD.**--May 1990 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 3.77 ft below land-surface datum, Oct. 21, 1999; lowest measured, 7.90 ft below land-surface datum, Jul. 8, 1993.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16	5.24	FEB 26	5.32	APR 10	4.99	JUL 25	6.39
WATER YEAR 2001		HIGHEST	4.99	APR 10, 2001	LOWEST	6.39	JUL 25, 2001



## GROUND-WATER LEVELS

193

## NORTHAMPTON COUNTY

370807075570806. Local number, 63F 55 SOW 182E.

**LOCATION.**--Lat 37°08'08", long 75°57'07", NAD83, Hydrologic Unit 02080110, at Kiptopeke Wildlife Refuge, 0.6 mi southeast of State Highway 600, 0.8 mi southeast of Kiptopeke, and 0.9 mi southeast of intersection of State Highway 600 and U.S. Highway 13. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Columbia aquifer of Quaternary age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 20 ft, screened 10 to 20 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to Jul. 24, 1995, bimonthly measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 10 ft above sea level, from topographic map. Measuring point: Top of casing, 1.3 ft above land-surface datum.

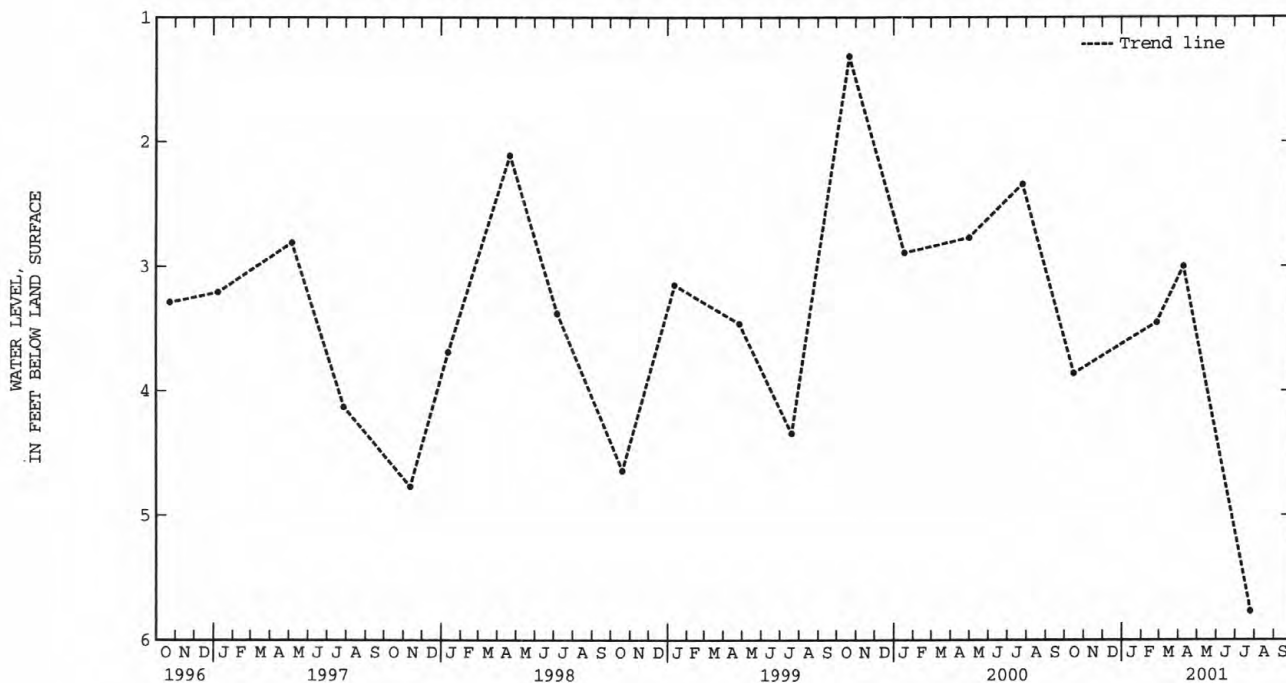
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division.

**PERIOD OF RECORD.**--May 1990 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 1.31 ft below land-surface datum, Oct. 21, 1999; lowest measured, 6.20 ft below land-surface datum, Oct. 9, 1990.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16	3.86	FEB 26	3.45	APR 10	3.00	JUL 25	5.77
WATER YEAR 2001		HIGHEST	3.00	APR 10, 2001		LOWEST	5.77 JUL 25, 2001



## GROUND-WATER LEVELS

## NORTHAMPTON COUNTY

371709075560801. Local number, 63G 15 SOW 104C.

**LOCATION.**--Lat 37°17'09", long 75°56'06", NAD83, Hydrologic Unit 02080110, 50 ft north of State Highway 639, 0.1 mi east of intersection of State Highways 600 and 639, and 0.7 mi west of Oyster. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Yorktown-Eastover aquifer of Miocene-Pliocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 310 ft, screened 300 to 310 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Jul. 15, 1985 to Oct. 23, 1995, continuous strip-chart recorder. Prior to Jul. 15, 1985, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 28 ft above sea level, from topographic map. Measuring point: Top of recorder shelf, 1.24 ft above land-surface datum prior to Nov. 10, 1986; 1.75 ft prior to Jun. 4, 1996. Top of casing, 1.50 ft thereafter.

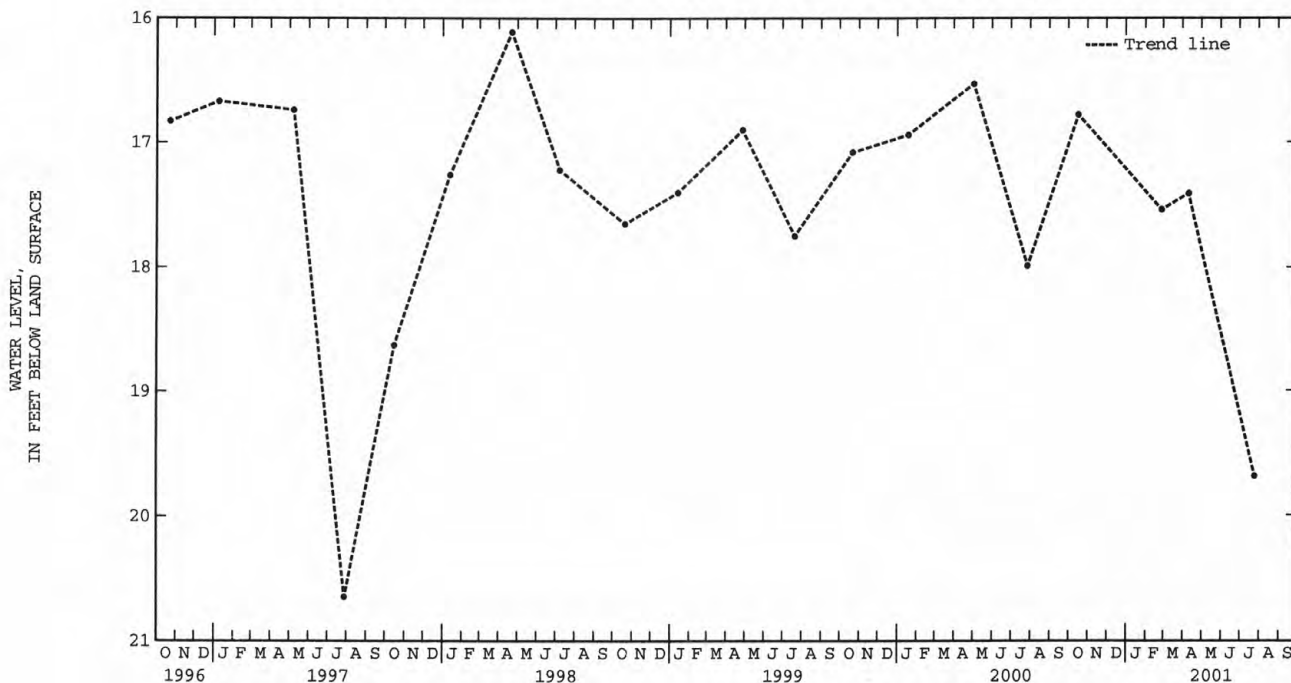
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

**PERIOD OF RECORD.**--October 1977 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level recorded, 16.11 ft below land-surface datum, Apr. 21, 1998; lowest measured, 27.96 ft below land-surface datum, Oct. 8, 1982.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16	16.78	FEB 26	17.54	APR 10	17.41	JUL 25	19.69
WATER YEAR 2001		HIGHEST	16.78	OCT 16, 2000	LOWEST	19.69	JUL 25, 2001





## GROUND-WATER LEVELS

195

## NORTHAMPTON COUNTY

371709075560802. Local number, 63G 16 SOW 104B.

**LOCATION.**--Lat 37°17'09", long 75°56'07", NAD83, Hydrologic Unit 02080110, 50 ft north of State Highway 639, 0.1 mi east of intersection of State Highways 600 and 639, and 0.7 mi west of Oyster. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Yorktown-Eastover aquifer of Miocene-Pliocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 240 ft, screened 230 to 240 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sep. 30, 1985, to Jul. 24, 1995, bimonthly measurement with chalked tape. Prior to Sep. 30, 1985, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 28 ft above sea level, from topographic map. Measuring point: Top of casing, 0.4 ft above land-surface datum prior to Feb. 29, 1988; 0.9 ft thereafter.

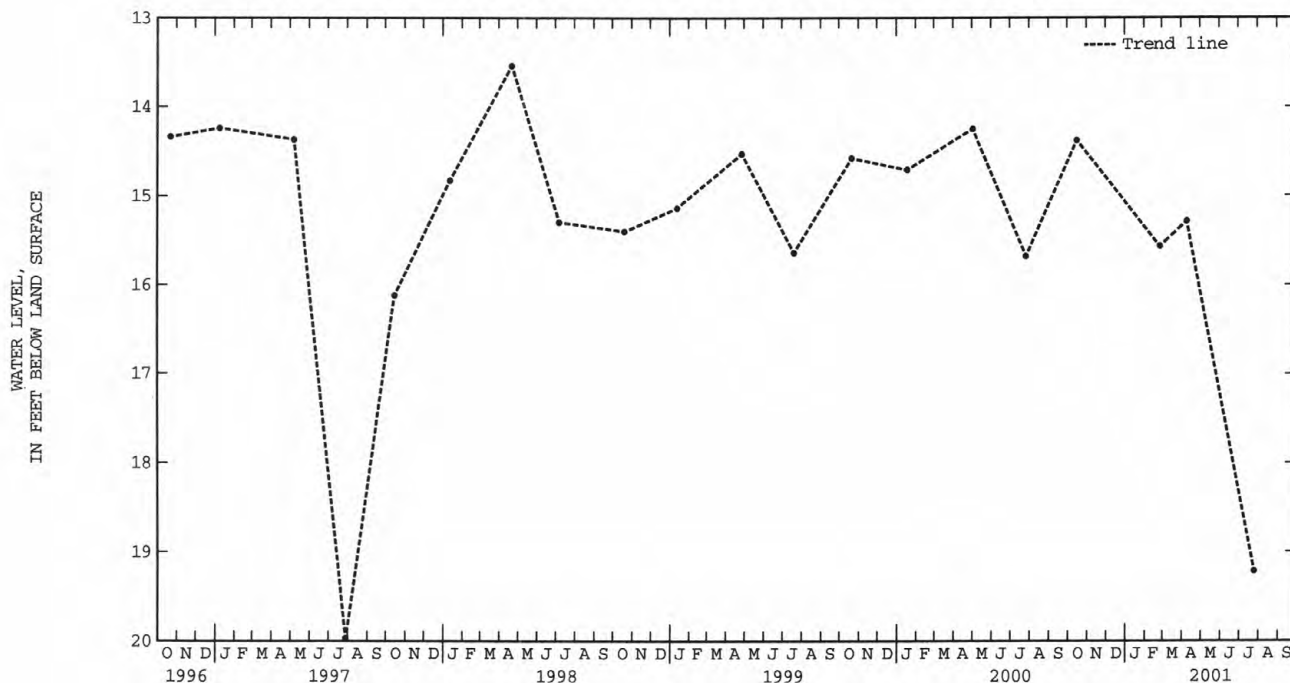
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

**PERIOD OF RECORD.**--October 1977 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 13.54 ft below land-surface datum, Apr. 21, 1998; lowest measured, 23.47 ft below land-surface datum, Oct. 8, 1982.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16	14.38	FEB 26	15.57	APR 10	15.29	JUL 25	19.22
WATER YEAR 2001		HIGHEST	14.38	OCT 16, 2000	LOWEST	19.22	JUL 25, 2001



## GROUND-WATER LEVELS

## NORTHAMPTON COUNTY

371709075560803. Local number, 63G 17 SOW 104A.

**LOCATION.**--Lat 37°17'09", long 75°56'07", NAD83, Hydrologic Unit 02080110, 50 ft north of State Highway 639, 0.1 mi east of intersection of State Highways 600 and 639, and 0.7 mi west of Oyster. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Yorktown-Eastover aquifer of Miocene-Pliocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 140 ft, screened 130 to 140 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sep. 30, 1985, to Jul. 24, 1995, bimonthly measurement with chalked tape. Prior to Sep. 30, 1985, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 28 ft above sea level, from topographic map. Measuring point: Top of casing, 0.05 ft above land-surface datum prior to Feb. 29, 1988; 0.5 ft thereafter.

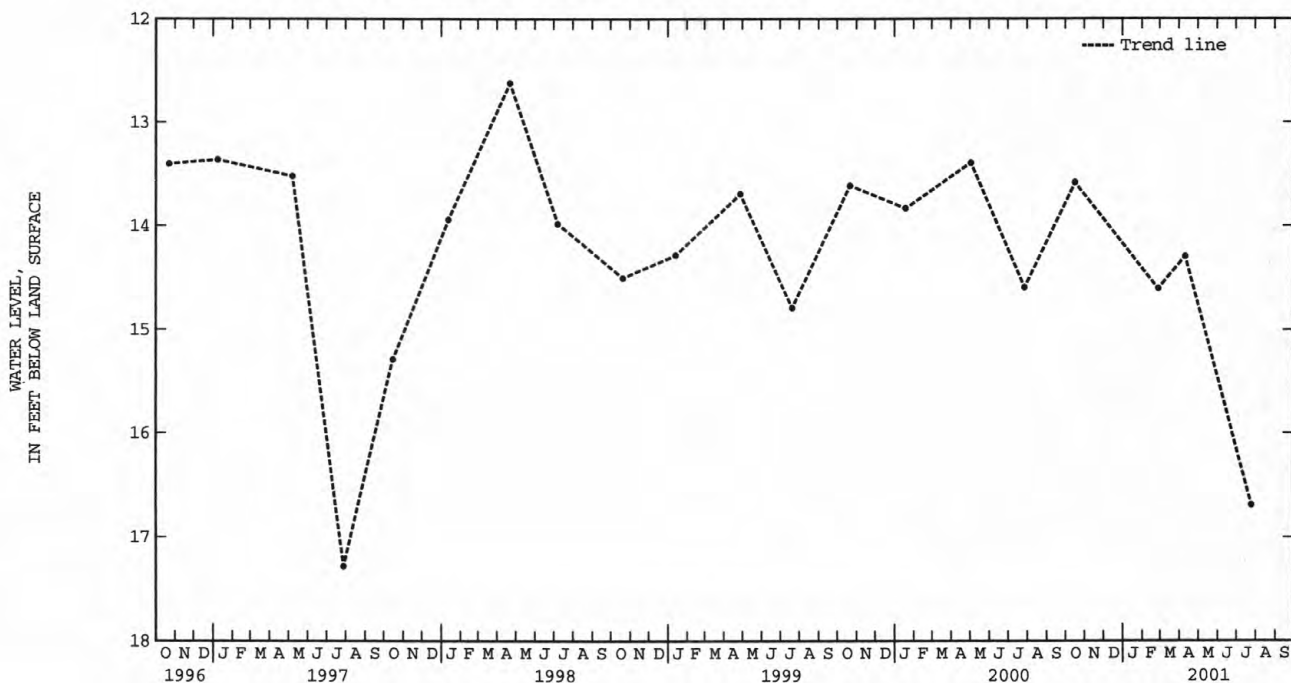
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

**PERIOD OF RECORD.**--October 1977 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 12.62 ft below land-surface datum, Apr. 21, 1998; lowest measured, 21.99 ft below land-surface datum, Oct. 8, 1982.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16	13.58	FEB 26	14.60	APR 10	14.29	JUL 25	16.69
WATER YEAR 2001		HIGHEST	13.58	OCT 16, 2000	LOWEST	16.69	JUL 25, 2001



## GROUND-WATER LEVELS

197

## NORTHAMPTON COUNTY

371653075584801. Local number, 63G 22 SOW 111A.

**LOCATION.**--Lat 37°16'53", long 75°58'47", NAD83, Hydrologic Unit 02080109, 50 ft west of U.S. Highway 13, 0.4 mi north of intersection of U.S. Highway 13 and State Highway 641, and 0.7 mi southwest of Cheriton. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Yorktown-Eastover aquifer of Miocene-Pliocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 150 ft, screened 140 to 150 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sep. 30, 1985, to Jul. 24, 1995, bimonthly measurement with chalked tape. Prior to Sept. 30, 1985, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 15 ft above sea level, from topographic map. Measuring point: Top of casing, at land-surface datum prior to Apr. 27, 1987; 1.60 ft Apr. 27, 1987, to Feb. 29, 1988; 1.1 ft Mar. 1, 1988, to Jun. 19, 1989; 0.80 ft thereafter.

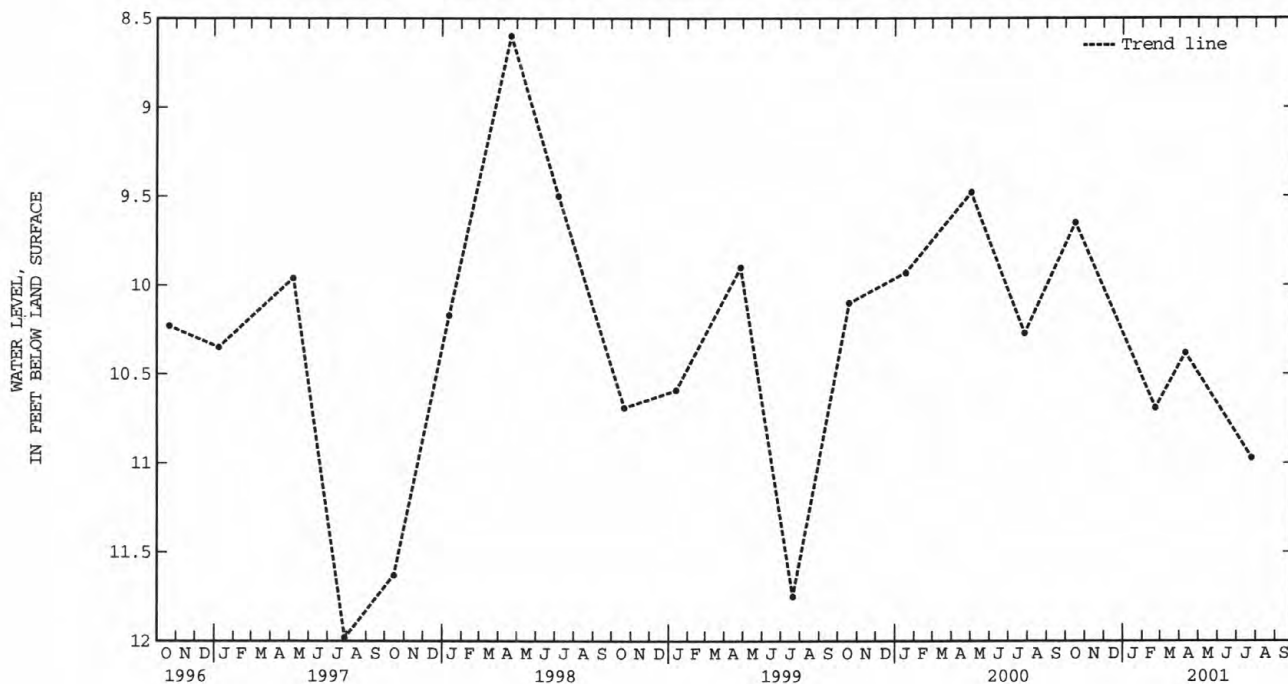
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

**PERIOD OF RECORD.**--July 1979 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 8.60 ft below land-surface datum, Apr. 21, 1998; lowest measured, 14.51 ft below land-surface datum, Feb. 17, 1981.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16	9.65	FEB 21	10.69	APR 10	10.38	JUL 25	10.97
WATER YEAR 2001		HIGHEST	9.65	OCT 16, 2000	LOWEST	10.97	JUL 25, 2001



## GROUND-WATER LEVELS

## NORTHAMPTON COUNTY

371653075584802. Local number, 63G 23 SOW 111B.

**LOCATION.**--Lat 37°16'53", long 75°58'47", NAD83, Hydrologic Unit 02080109, 50 ft west of U.S. Highway 13, 0.4 mi north of intersection of U.S. Highway 13 and State Highway 641, and 0.7 mi southwest of Cheriton. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Yorktown-Eastover aquifer of Miocene-Pliocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 280 ft, screened 270 to 280 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Jul. 20, 1985 to Oct 24, 1995, continuous strip chart recorder. Prior to Jul. 20, 1985, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 15 ft above sea level, from topographic map. Measuring point: Top of recorder shelf, 1.42 ft above land-surface datum prior to Jul. 20, 1987; 1.56 ft thereafter.

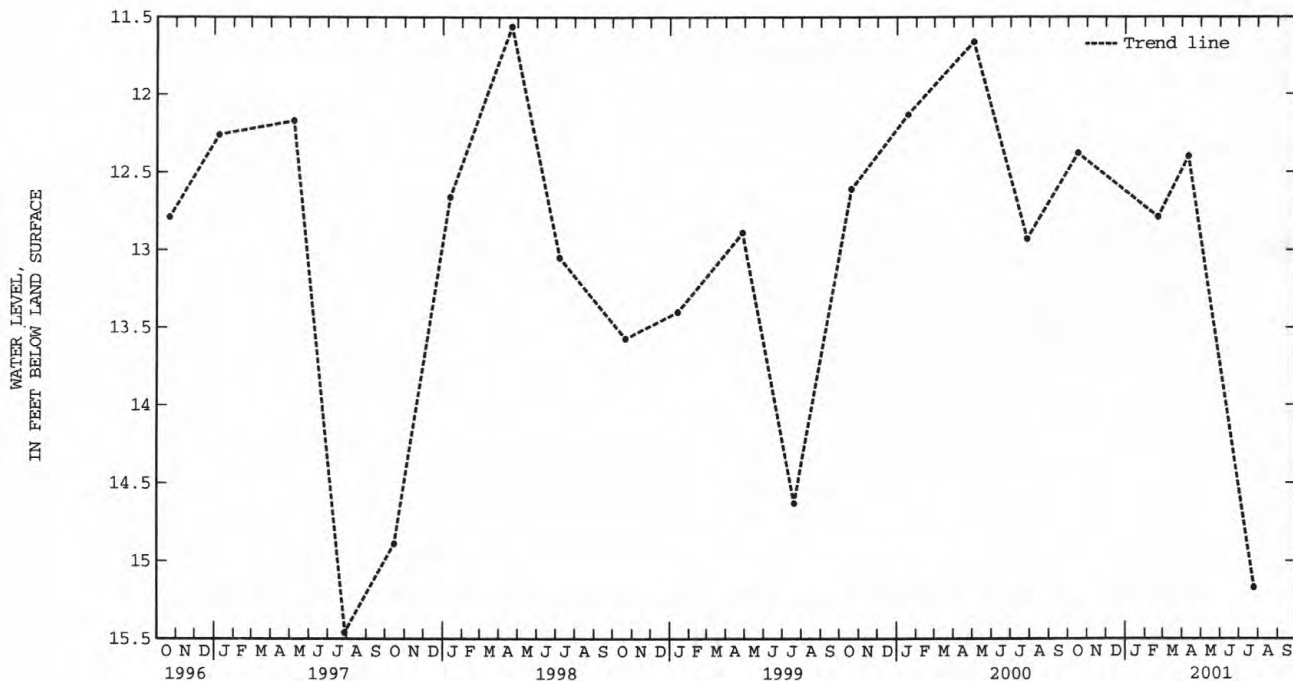
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

**PERIOD OF RECORD.**--July 1979 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 11.01 ft below land-surface datum, Dec. 30, 1982; lowest measured, 22.47 ft below land-surface datum, Sep. 15, 1982.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16	12.38	FEB 21	12.79	APR 10	12.40	JUL 25	15.17
WATER YEAR 2001		HIGHEST	12.38	OCT 16, 2000	LOWEST	15.17	JUL 25, 2001



## GROUND-WATER LEVELS

199

## NORTHAMPTON COUNTY

371653075584804. Local number, 63G 25 SOW 111S.

**LOCATION.**--Lat 37°16'53", long 75°58'47", NAD83, Hydrologic Unit 02080109, 50 ft west of U.S. Highway 13, 0.4 mi north of intersection of U.S. Highway 13 and State Highway 641, and 0.7 mi southwest of Cheriton. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Columbia aquifer of Quaternary age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 1.25 in., depth 70 ft, screened 60 to 70 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sep. 30, 1985, to Jul. 24, 1995, bimonthly measurement with chalked tape. Prior to Sep. 30, 1985, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 15 ft above sea level, from topographic map. Measuring point: Top of casing, 0.64 ft above land-surface datum prior to Oct. 10, 1996; 0.60 ft thereafter.

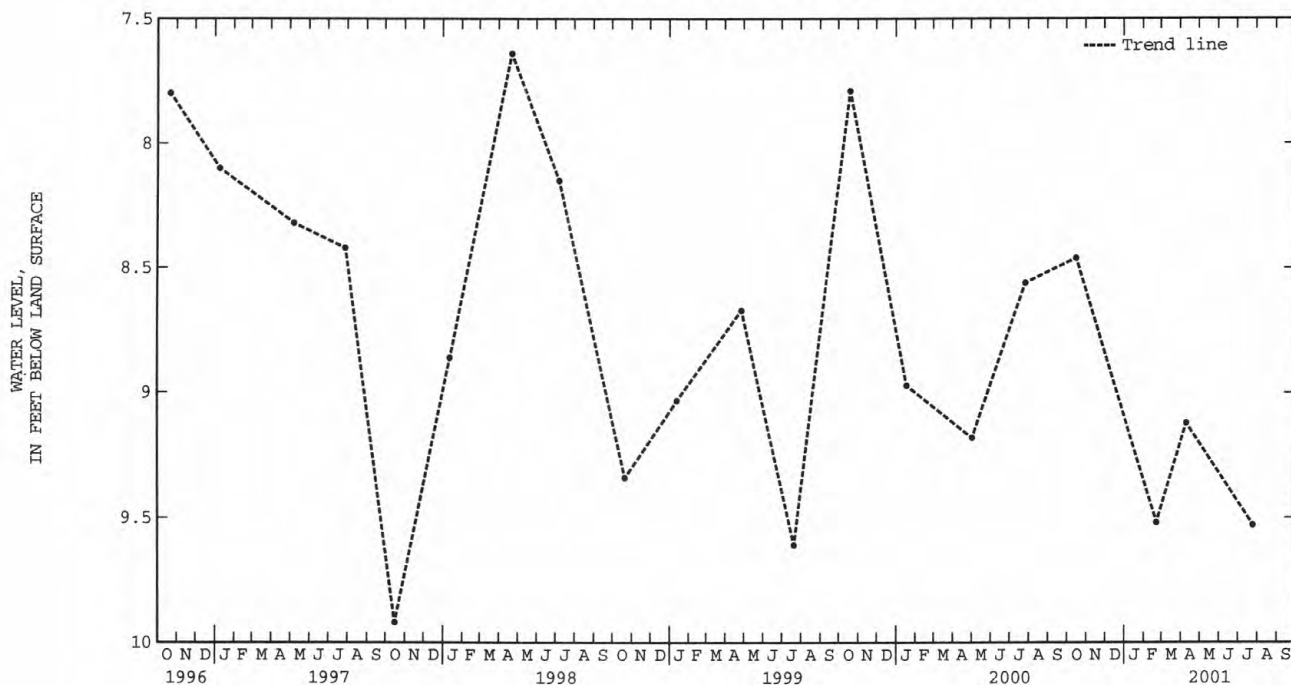
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division.

**PERIOD OF RECORD.**--July 1979 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 7.64 ft below land-surface datum, Apr. 21, 1998; lowest measured, 10.82 ft below land-surface datum, Nov. 11, 1986.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16	8.46	FEB 21	9.52	APR 10	9.12	JUL 25	9.53
WATER YEAR 2001		HIGHEST	8.46	OCT 16, 2000	LOWEST	9.53	JUL 25, 2001



## GROUND-WATER LEVELS

## NORTHAMPTON COUNTY

372705075555901. Local number, 63H 4 SOW 103C.

**LOCATION.**--Lat 37°27'05", long 75°55'58", NAD83, Hydrologic Unit 02080109, 0.2 mi north of State Highway 619, 0.5 mi northwest of intersection of State Highways 619 and 622, and 0.5 mi northwest of Bridgetown. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Yorktown-Eastover aquifer of Miocene-Pliocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 235 ft, screened 225 to 235 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sep. 30, 1985, to Jul. 24, 1995, bimonthly measurement with chalked tape. Prior to Sep. 30, 1985, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 17 ft above sea level, from topographic map. Measuring point: Top of casing, 0.5 ft above land-surface datum prior to Mar 1, 1988; 0.8 ft thereafter.

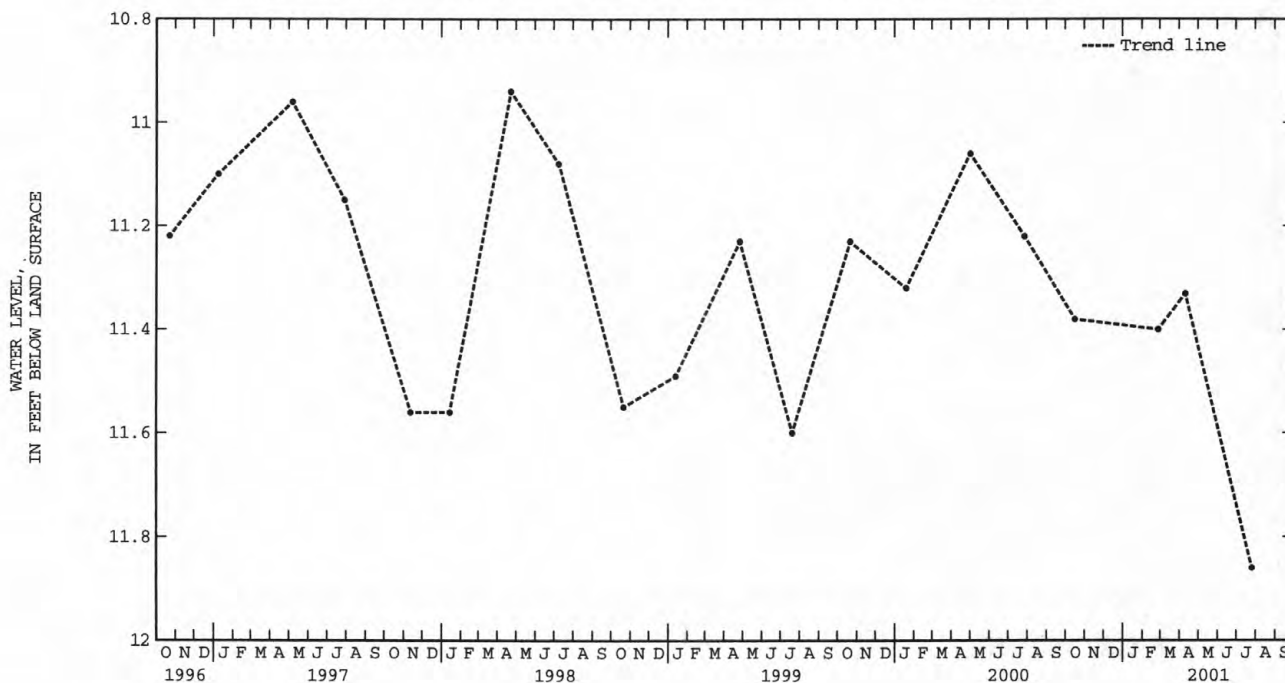
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

**PERIOD OF RECORD.**--October 1977 to current year. Unpublished records available prior to October 1987 in file of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 10.15 ft below land-surface datum, May 1, 1979; lowest measured, 12.56 ft below land-surface datum, Nov. 11, 1986.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16	11.38	FEB 26	11.40	APR 10	11.33	JUL 26	11.86
WATER YEAR 2001		HIGHEST	11.33	APR 10, 2001	LOWEST	11.86	JUL 26, 2001





## GROUND-WATER LEVELS

201

## NORTHAMPTON COUNTY

372705075555902. Local number, 63H 5 SOW 103B.

**LOCATION.**--Lat 37°27'05", long 75°55'58", NAD83, Hydrologic Unit 02080109, 0.2 mi north of State Highway 619, 0.5 mi northwest of intersection of State Highways 619 and 622, and 0.5 mi northwest of Bridgetown. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Yorktown-Eastover aquifer of Miocene-Pliocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 132 ft, screened 122 to 132 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sep. 30, 1985, to Jul. 24, 1995, bimonthly measurement with chalked tape. Prior to Sep. 30, 1985, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 17 ft above sea level, from topographic map. Measuring point: Top of casing, 0.55 ft above land-surface datum prior to Mar. 1, 1988; 1.25 ft thereafter.

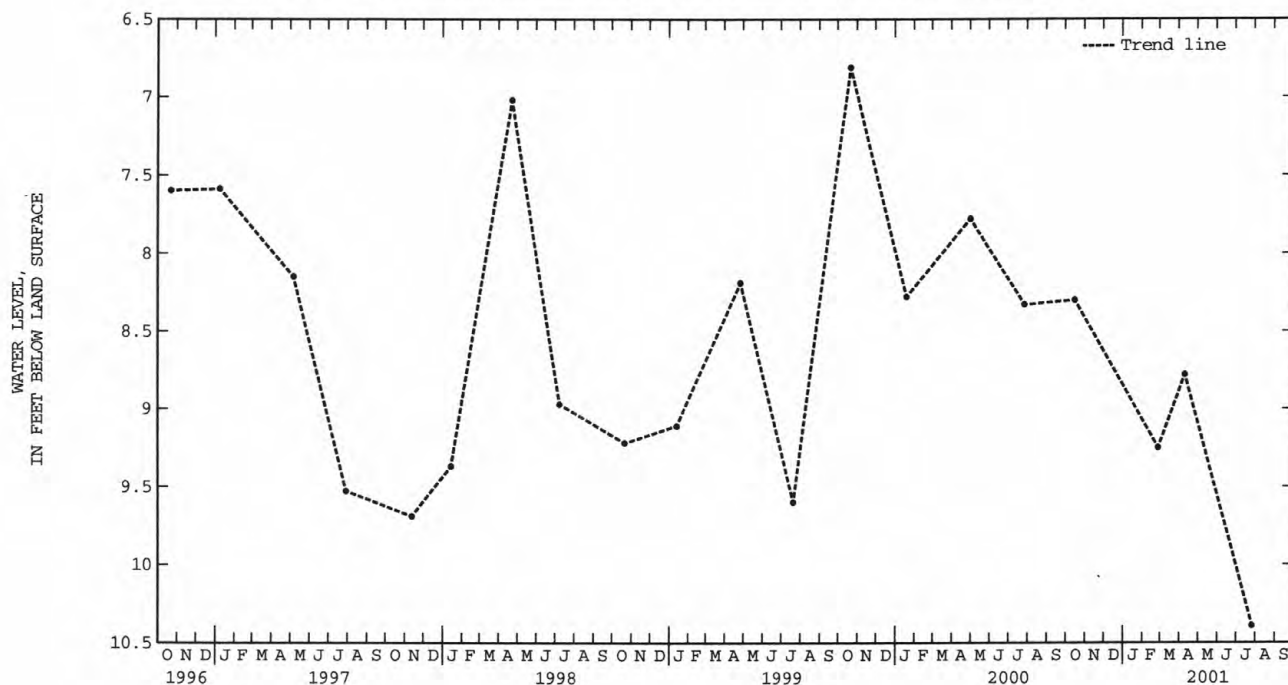
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

**PERIOD OF RECORD.**--October 1977 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 6.81 ft below land-surface datum, Oct. 21, 1999; lowest measured, 12.00 ft below land-surface datum, Jan. 9, 1989.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16	8.30	FEB 26	9.25	APR 10	8.78	JUL 26	10.39
WATER YEAR 2001		HIGHEST	8.30	OCT 16, 2000		LOWEST	10.39
							JUL 26, 2001



## GROUND-WATER LEVELS

## NORTHAMPTON COUNTY

372705075555903. Local number, 63H 6 SOW 103A.

**LOCATION.**--Lat 37°27'05", long 75°55'58", NAD83, Hydrologic Unit 02080109, 0.2 mi north of State Highway 619, 0.5 mi northwest of intersection of State Highways 619 and 622, and 0.5 mi northwest of Bridgetown. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Columbia aquifer of Quaternary age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 37 ft, screened 27 to 37 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sep. 30, 1985, to Jul. 24, 1995, bimonthly measurement with chalked tape. Prior to Sep. 30, 1985, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 17 ft above sea level, from topographic map. Measuring point: Top of casing, 0.2 ft above land-surface datum.

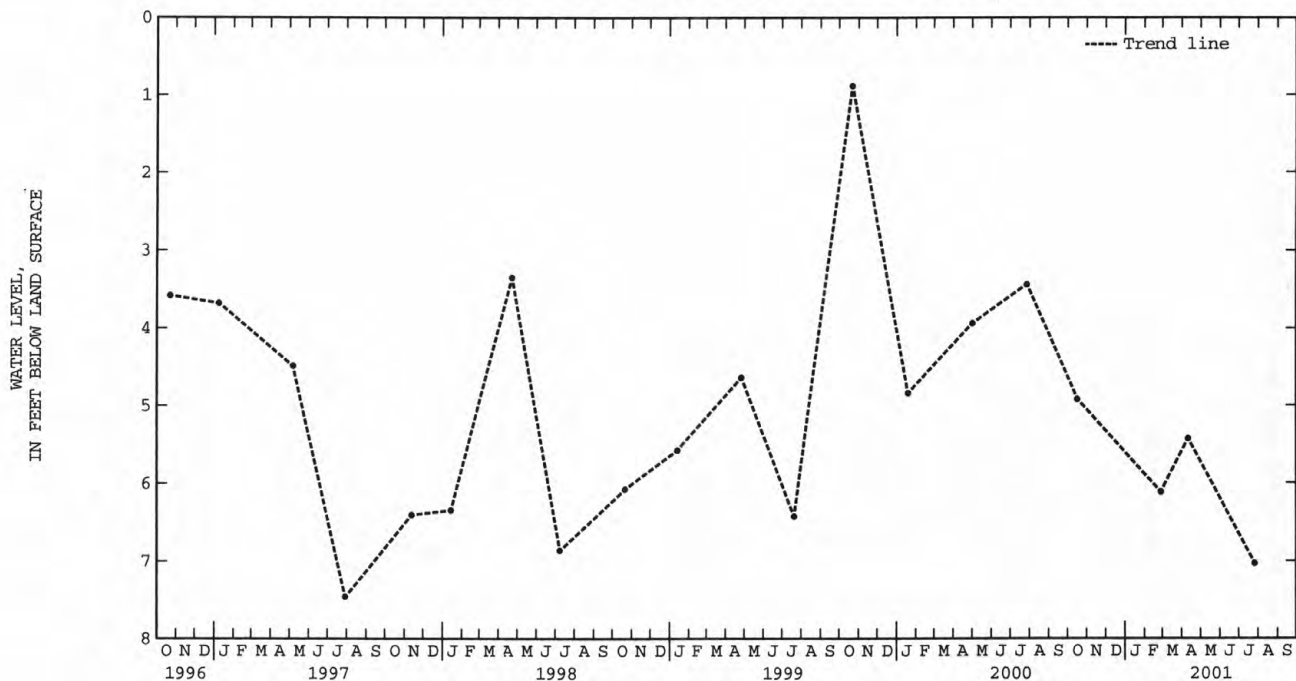
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division.

**PERIOD OF RECORD.**--October 1977 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 0.88 ft below land-surface datum, Oct. 21, 1999; lowest measured, 9.93 ft below land-surface datum, Jan. 9, 1989.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16	4.92	FEB 26	6.11	APR 10	5.43	JUL 26	7.03
WATER YEAR 2001		HIGHEST	4.92	OCT 16, 2000	LOWEST	7.03	JUL 26, 2001



## GROUND-WATER LEVELS

203

## NORTHAMPTON COUNTY

373230075541001. Local number, 63J 1 SOW 113A.

**LOCATION.**--Lat 37°32'16", long 75°54'06", NAD83, Hydrologic Unit 02080109, 0.15 mi north of State Highway 183, 0.4 mi east of intersection of State Highways 183 and 611, and 1.3 mi west of Wardtown. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Yorktown-Eastover aquifer of Miocene-Pliocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 120 ft, screened 110 to 120 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to Jul. 20, 1995, bimonthly measurement with chalked tape. Prior to Oct. 1, 1985, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 22 ft above sea level, from topographic map. Measuring point: Top of casing, 1.32 ft above land-surface datum prior to Oct. 6, 1988; 1.5 ft thereafter.

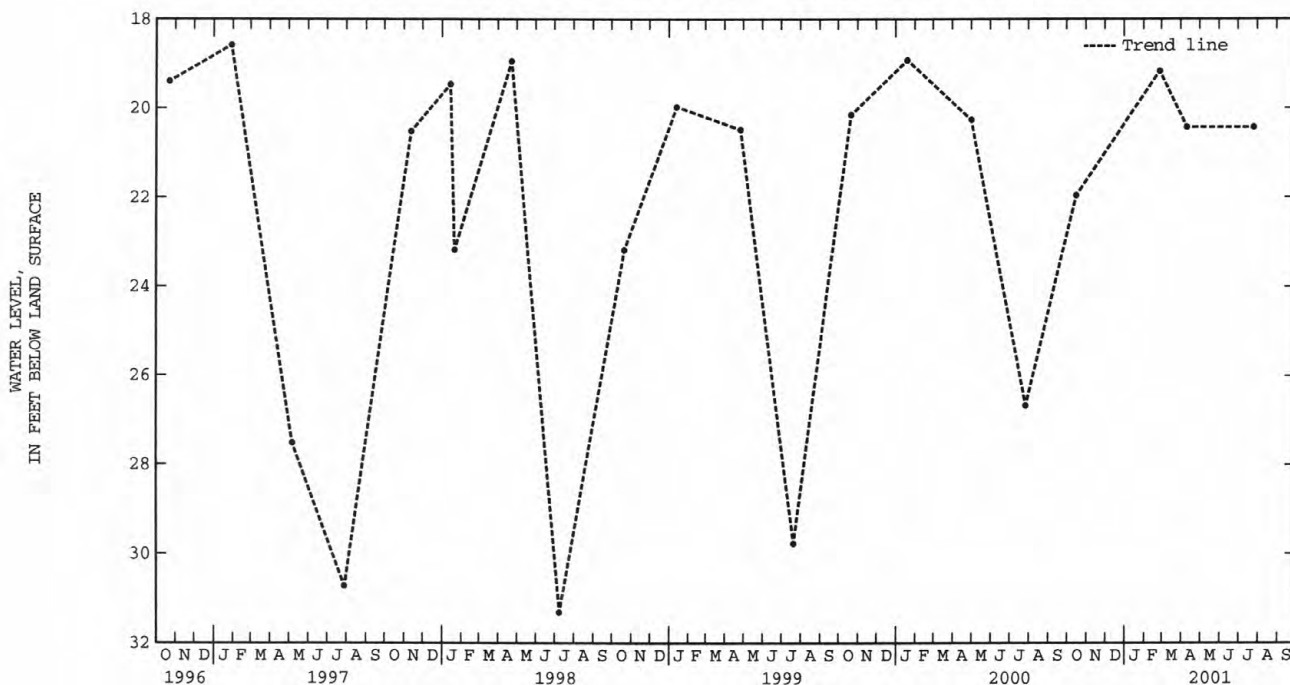
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

**PERIOD OF RECORD.**--July 1981 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 17.79 ft below land-surface datum, Apr. 21, 1983; lowest measured, 32.94 ft below land-surface datum, Jul. 20, 1995.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16	21.96	FEB 26	19.17	APR 10	20.43	JUL 26	20.43
WATER YEAR 2001		HIGHEST		19.17 FEB 26, 2001		LOWEST	
						21.96 OCT 16, 2000	



## GROUND-WATER LEVELS

## NORTHAMPTON COUNTY

373230075541002. Local number, 63J 2 SOW 113B.

**LOCATION.**--Lat 37°32'16", long 75°54'06", NAD83, Hydrologic Unit 02080109, 0.15 mi north of State Highway 183, 0.40 mi east of intersection of State Highways 183 and 611, and 1.3 mi west of Wardtown. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Yorktown-Eastover aquifer of Miocene-Pliocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 225 ft, screened 215 to 225 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to Jul. 20, 1995, bimonthly measurement with chalked tape. Prior to Oct. 1, 1985, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 22 ft above sea level, from topographic map. Measuring point: Top of casing, 0.52 ft above land-surface datum prior to Oct. 6, 1988; 1.3 ft thereafter.

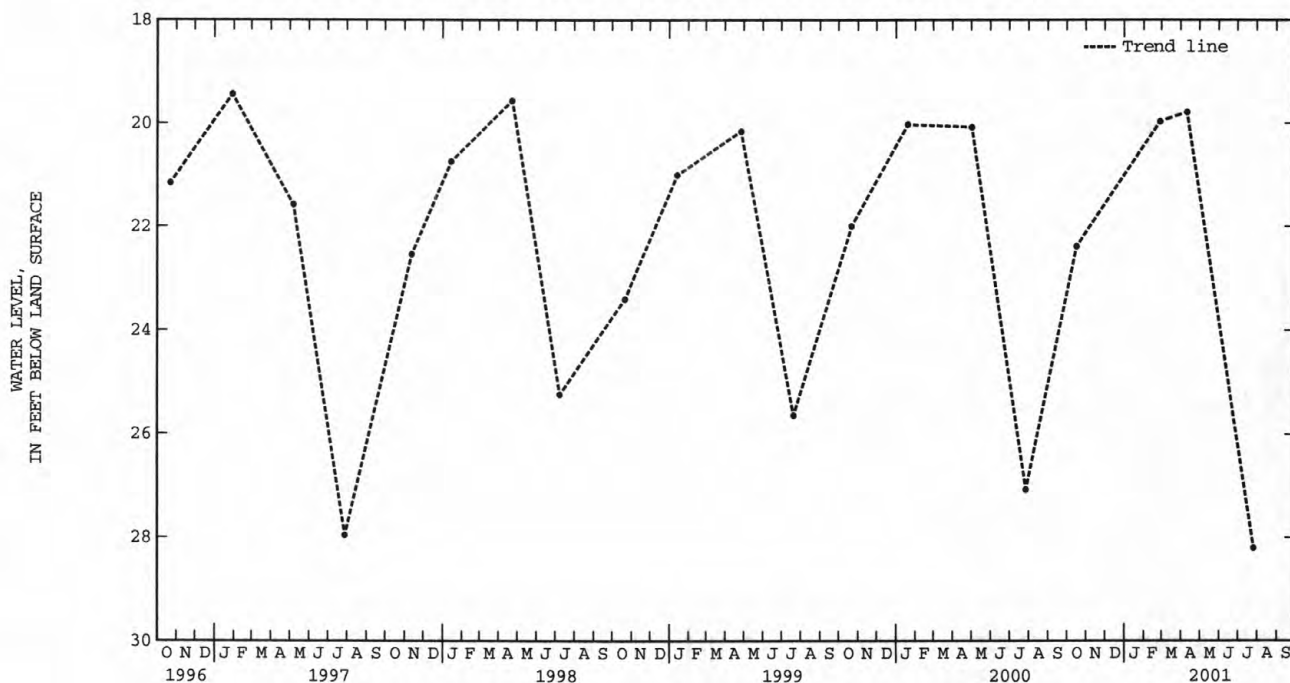
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

**PERIOD OF RECORD.**--July 1981 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 18.20 ft below land-surface datum, Apr. 21, 1983; lowest measured, 28.20 ft below land-surface datum, Jul. 26, 2001.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16	22.38	FEB 26	19.96	APR 10	19.78	JUL 26	28.20
WATER YEAR 2001		HIGHEST	19.78	APR 10, 2001	LOWEST	28.20	JUL 26, 2001



## GROUND-WATER LEVELS

205

## NORTHAMPTON COUNTY

373230075541003. Local number, 63J 3 SOW 113C.

**LOCATION.**--Lat 37°32'16", long 75°54'06", NAD83, Hydrologic Unit 02080109, 0.15 mi north of State Highway 183, 0.4 mi east of intersection of State Highways 183 and 611, and 1.3 mi west of Wardtown. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Yorktown-Eastover aquifer of Miocene-Pliocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 290 ft, screened 280 to 290 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to Jul. 20, 1995, bimonthly measurement with chalked tape. Prior to Oct. 1, 1985, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 22 ft above sea level, from topographic map. Measuring point: Top of casing, 1.44 ft above land-surface datum.

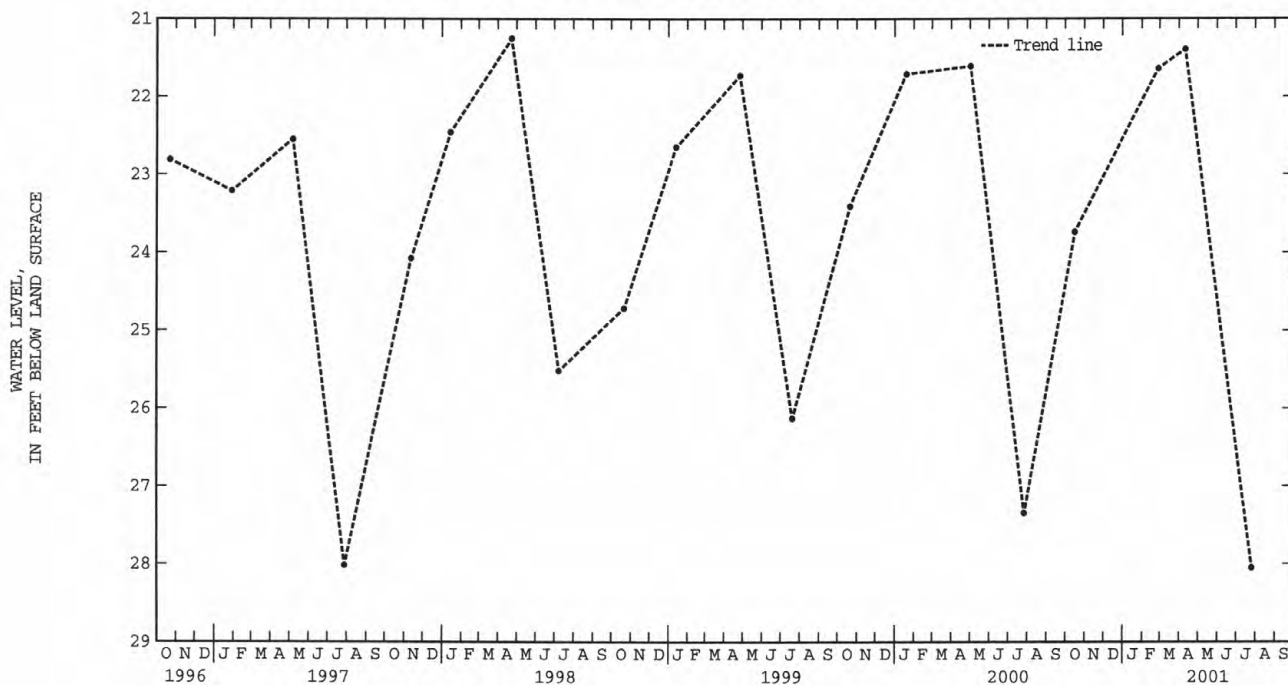
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

**PERIOD OF RECORD.**--July 1981 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 19.26 ft below land-surface datum, Apr. 21, 1983; lowest measured, 28.05 ft below land-surface datum, Jul. 26, 2001.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16	23.74	FEB 26	21.64	APR 10	21.39	JUL 26	28.05
WATER YEAR 2001		HIGHEST	21.39	APR 10, 2001		LOWEST	28.05
							JUL 26, 2001



## GROUND-WATER LEVELS

## NORTHAMPTON COUNTY

373059075484501. Local number, 64J 9 SOW 112A.

**LOCATION.**--Lat 37°30'59", long 75°48'44", NAD83, Hydrologic Unit 02080109, 100 ft northeast of State Highway 660, 0.3 mi southeast of intersection of State Highways 660 and 600, and 0.3 mi west of Willis Wharf. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Yorktown-Eastover aquifer of Miocene-Pliocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 135 ft, screened 125 to 135 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sep. 30, 1985, to Jul. 24, 1995, bimonthly measurement with chalked tape. Prior to Sep. 30, 1985, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 30 ft above sea level, from topographic map. Measuring point: Top of casing, at land-surface datum prior to Feb. 29, 1988; 0.7 ft thereafter.

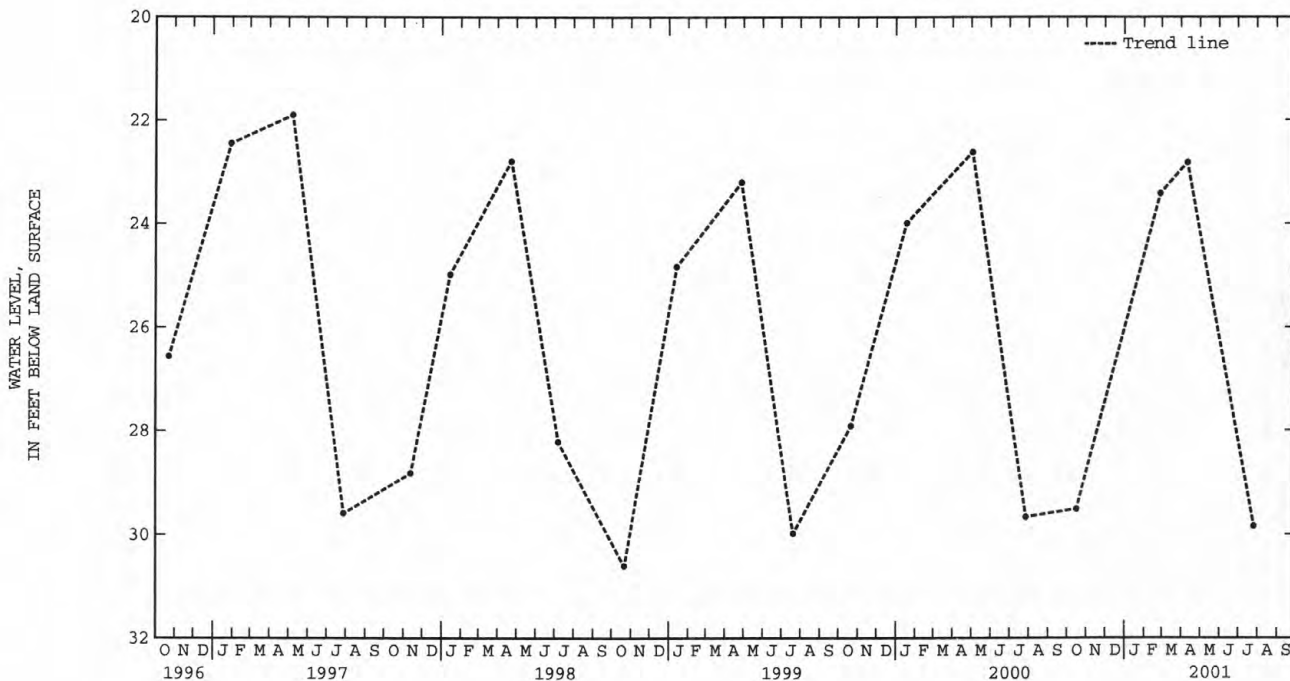
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

**PERIOD OF RECORD.**--July 1979 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 21.19 ft below land-surface datum, Feb. 22, 1993; lowest measured, 33.57 ft below land-surface datum, Jul. 18, 1980.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16	29.50	FEB 26	23.43	APR 10	22.83	JUL 26	29.84
WATER YEAR 2001		HIGHEST	22.83	APR 10, 2001	LOWEST	29.84	JUL 26, 2001





## GROUND-WATER LEVELS

207

## NORTHAMPTON COUNTY

373059075484502. Local number, 64J 10 SOW 112B.

**LOCATION.**--Lat 37°30'59", long 75°48'44", NAD83, Hydrologic Unit 02080109, 100 ft northeast of State Highway 660, 0.3 mi southeast of intersection of State Highways 600 and 660, and 0.3 mi west of Willis Wharf. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Yorktown-Eastover aquifer of Miocene-Pliocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 210 ft, screened 200 to 210 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 5, 1985 to Oct. 23, 1995, continuous strip-chart recorder. Prior to Oct. 5, 1985, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 30 ft above sea level, from topographic map. Measuring point: Top of recorder shelf, 1.5 ft above land-surface datum prior to Aug. 12, 1987; 1.6 ft thereafter.

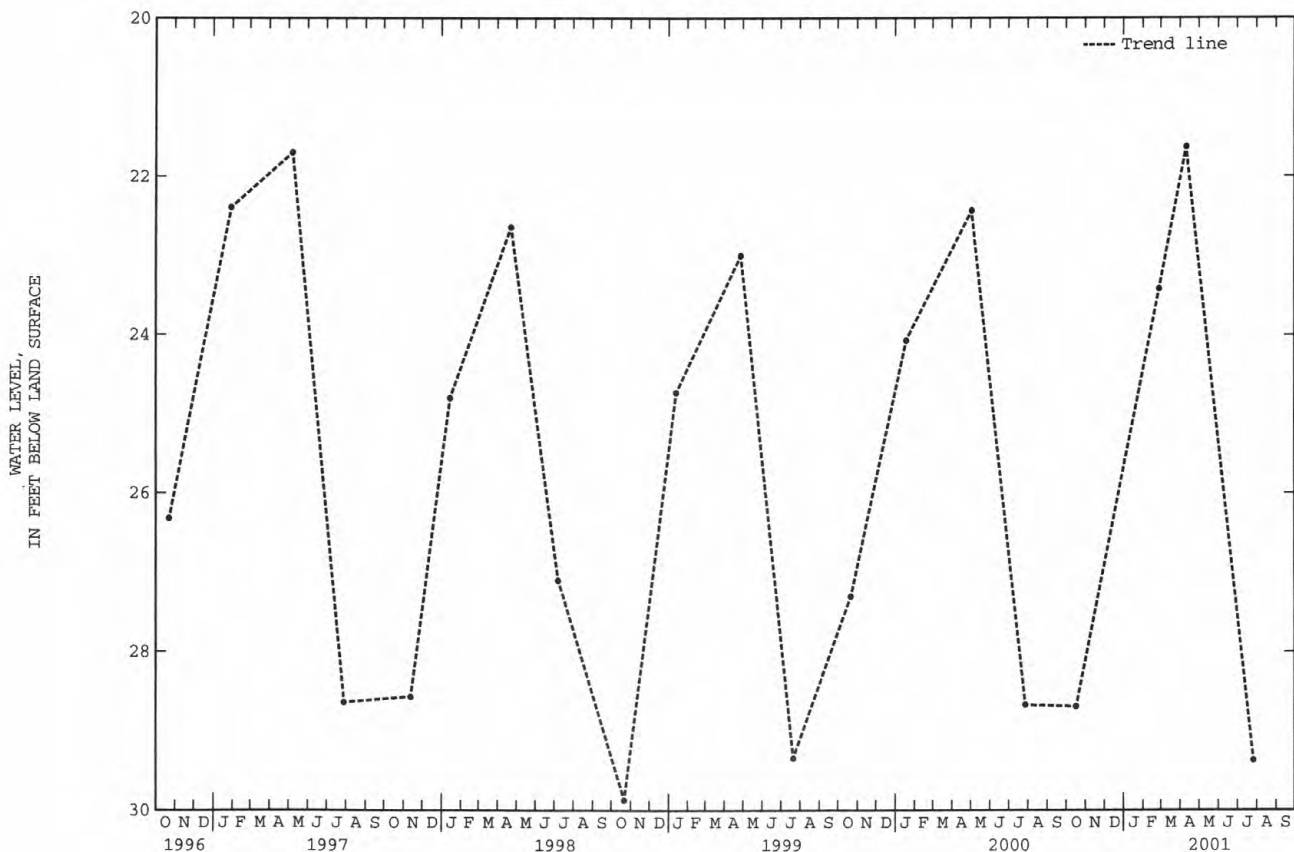
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by tidal effects and local pumpage.

**PERIOD OF RECORD.**--July 1979 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level recorded, 20.42 ft below land-surface datum, Mar. 13, 1993; lowest measured, 31.29 ft below land-surface datum, Oct. 1, 1979.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16	28.69	FEB 26	23.42	APR 10	21.63	JUL 26	29.37
WATER YEAR 2001		HIGHEST	21.63	APR 10, 2001	LOWEST	29.37	JUL 26, 2001



## GROUND-WATER LEVELS

## NORTHAMPTON COUNTY

373059075484503. Local number, 64J 11 SOW 112C.

**LOCATION.**--Lat 37°30'59", long 75°48'44", NAD83, Hydrologic Unit 02080109, 100 ft northeast of State Highway 660, 0.3 mi southeast of intersection of State Highways 600 and 660, and 0.3 mi west of Willis Wharf. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Yorktown-Eastover aquifer of Miocene-Pliocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 313 ft, screened 303 to 313 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sep. 30, 1985, to Jul. 24, 1995, bimonthly measurement with chalked tape. Prior to Sep. 30, 1985, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 30 ft above sea level, from topographic map. Measuring point: Top of casing, 0.4 ft above land-surface datum prior to Apr. 27, 1987; 0.65 ft thereafter.

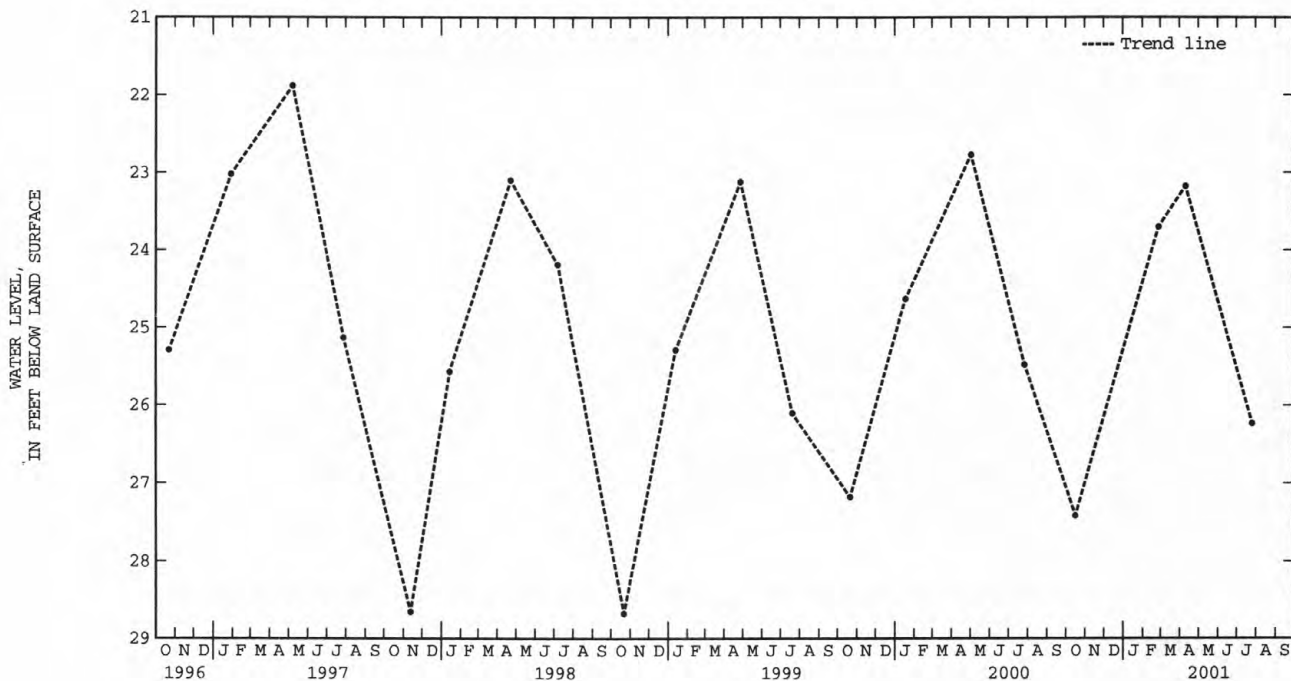
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by tidal effects and local pumpage.

**PERIOD OF RECORD.**--July 1979 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 20.78 ft below land-surface datum, Mar. 29, 1984; lowest measured, 35.70 ft below land-surface datum, Dec. 5, 1980.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16	27.42	FEB 26	23.70	APR 10	23.18	JUL 26	26.23
WATER YEAR 2001		HIGHEST	23.18	APR 10, 2001	LOWEST	27.42	OCT 16, 2000



ORANGE COUNTY

**LOCATION.**--Lat 38°10'02", long 78°09'41", NAD83, Hydrologic Unit 02080106, off U.S. Highway 15, 2.3 mi north of Gordonsville.  
Owner: M. L. Johnson.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 6 in., depth 98 ft, length of casing unknown.

**INSTRUMENTATION.**--Occasional measurement with chalked taped by Virginia Department of Environmental Quality - Water Division personnel. Prior to Oct. 31, 1995, continuous strip-chart recorder.

**DATUM.**--Elevation of land-surface datum is 480 ft above sea level, from topographic map. Measuring point: Top of casing, 0.40 ft above land-surface datum prior to Jun. 27, 1996; 1.90 ft thereafter.

**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division.

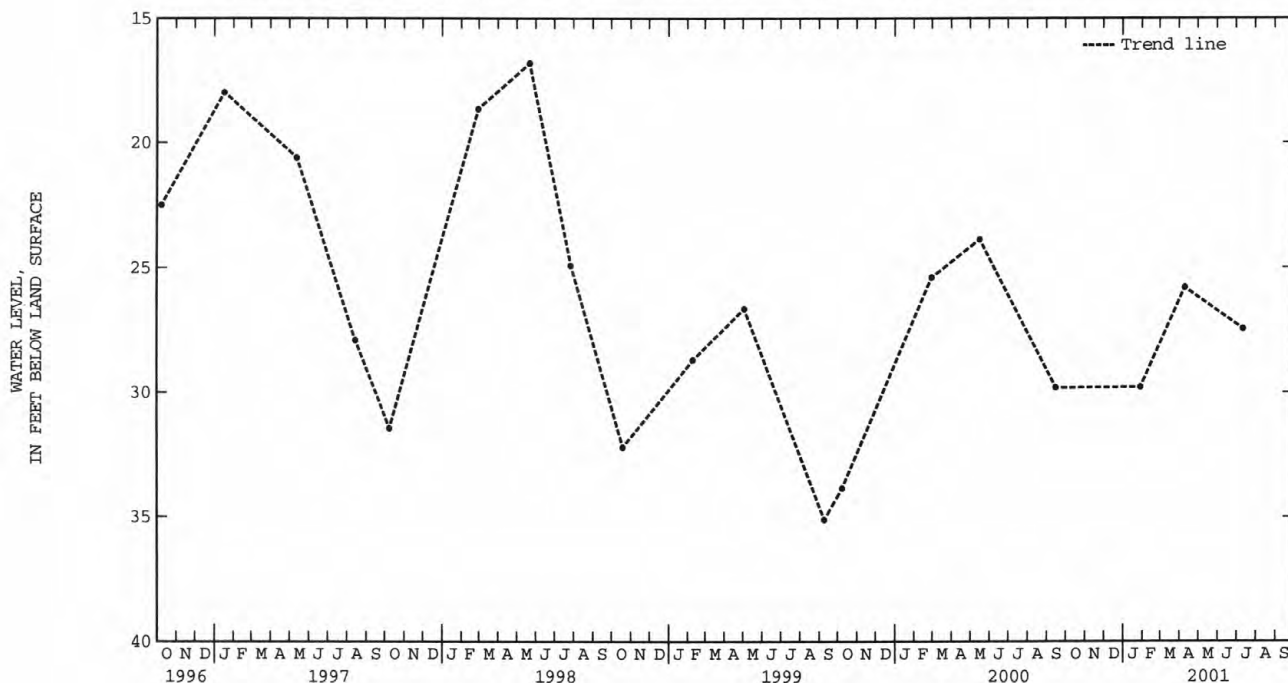
**PERIOD OF RECORD.**--February 1965 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level recorded, 11.83 ft below land-surface datum, Apr. 10, 1973; lowest recorded, 35.90 ft below land-surface datum, Jan. 31, 1966.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 29	29.78	APR 10	25.80	JUL 12	27.45

WATER YEAR 2001	HIGHEST	25.80	APR 10, 2001	LOWEST	29.78	JAN 29, 2001
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**LOCATION.**--Lat 36°47'32", long 80°07'02", NAD83, Hydrologic Unit 03010103, 300 ft west of State Highway 623, 1.0 mi northeast of intersection of State Highways 57 and 623, and 6.2 mi west of Philpott. Owner: Commonwealth of Virginia.

**WELL CHARACTERISTICS.**--Drilled unused water well, diameter 6.25 in., depth 250 ft, cased to 9 ft, open hole 9 to 250 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by USGS personnel. Oct. 1, 1996 to Oct. 1, 1999, occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to Oct. 1, 1996, bimonthly measurement with chalked tape. Prior to Oct. 1, 1985, occasional measurement with chalked tape.

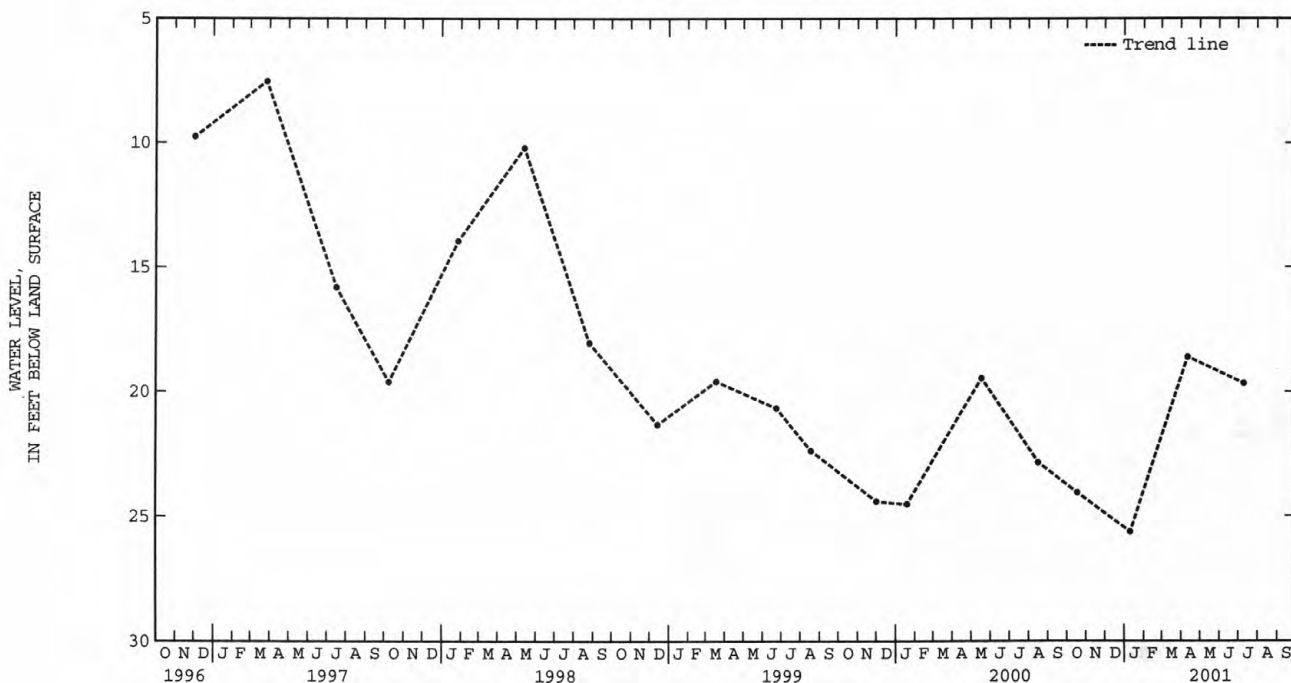
**DATUM.**--Elevation of land-surface datum is 1,060 ft above sea level, from topographic map. Measuring point: Top of casing, 0.5 ft above land-surface datum.

**PERIOD OF RECORD.**--May 1966 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 5.98 ft below land-surface datum, Mar. 23, 1993; lowest measured, 25.62 ft below land-surface datum, Jan. 10, 2001.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 18	24.06	JAN 10	25.62	APR 11	18.59	JUL 10	19.66
WATER YEAR 2001		HIGHEST	18.59	APR 11, 2001		LOWEST	25.62 JAN 10, 2001



## GROUND-WATER LEVELS

211

## CITY OF PORTSMOUTH

364823076181501. Local number, 60C 27.

**LOCATION.**--Lat 36°48'24", long 76°18'14", NAD83, Hydrologic Unit 02080208, 100 ft east of State Highway 239 (Victory Boulevard), 0.1 mi south of the intersection of State Highway 239 (Victory Boulevard) and State Highway 337 (Elem Avenue) in the city of Portsmouth. Owner: U.S. Department of the Navy.

**AQUIFER.**--Middle Potomac aquifer of Cretaceous age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 2 in., depth 908 ft, screened 903 to 908 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by USGS personnel.

**DATUM.**--Elevation of land-surface datum is 18 ft above sea level, from topographic map. Measuring point: Top of casing, 2.5 ft above land-surface datum.

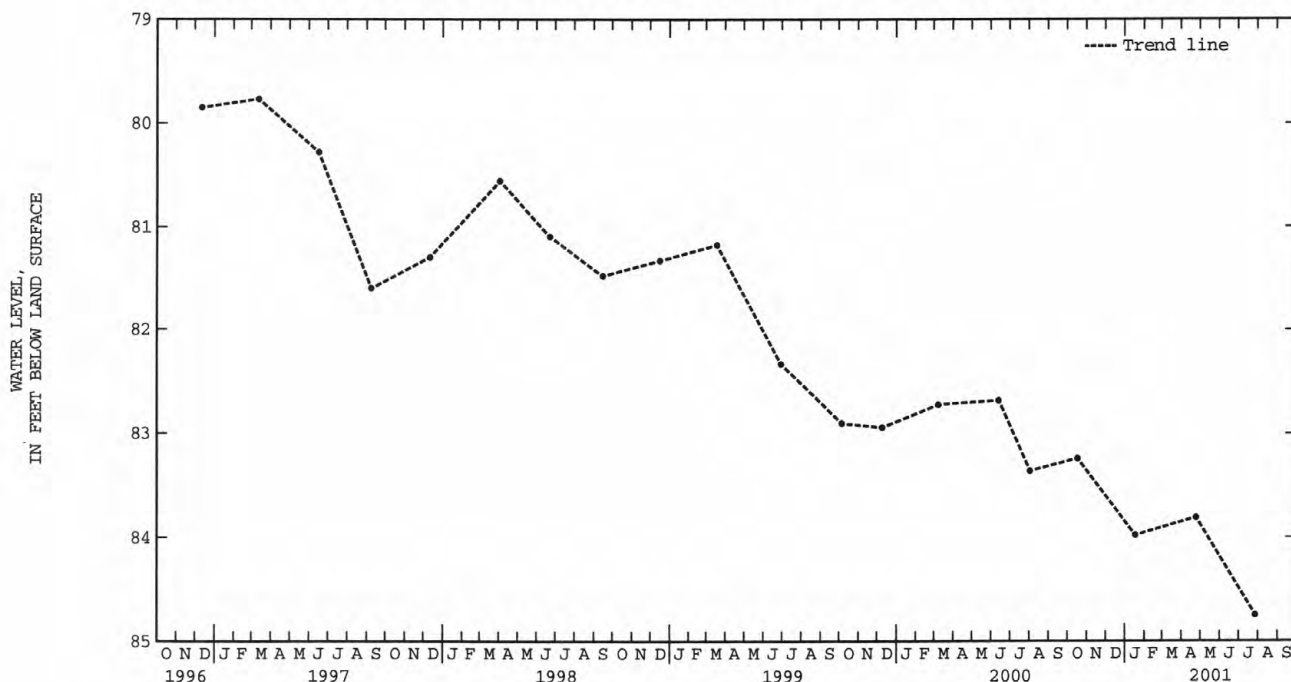
**REMARKS.**--Water level affected by regional drawdown.

**PERIOD OF RECORD.**--June 1985 to current year. Unpublished records available prior to October 1987 in files of the Geological Survey.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 63.65 ft below land-surface datum, Jun. 19, 1985; lowest measured, 84.75 ft below land-surface datum, Jul. 27, 2001.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 17	83.24	JAN 17	83.98	APR 24	83.81	JUL 27	84.75
WATER YEAR 2001		HIGHEST	83.24	OCT 17, 2000	LOWEST	84.75	JUL 27, 2001



**GROUND-WATER LEVELS**  
**CITY OF PORTSMOUTH**

365313076215101. Local number, 60D 2.

**LOCATION.**--Lat 36°53'14", long 76°21'50", NAD83, Hydrologic Unit 02080208, 1.1 mi east of the main gate of the U.S. Naval Supply Center on Main Street in Building 285, 2.0 mi northwest of West Norfolk in the city of Portsmouth, and 2.25 mi north of the intersection of U.S. Highway 17 and Cedar Lane (Crane Island Road). Owner: U.S. Department of the Navy.

**AQUIFER.**--Chickahominy-Piney Point aquifer of Eocene-Oligocene age.

**WELL CHARACTERISTICS.**--Drilled unused water well, diameter 8 in. to 170 ft, diameter 4 in. from 170 to 565 ft, depth 565 ft, screened 545 to 565 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by USGS personnel.

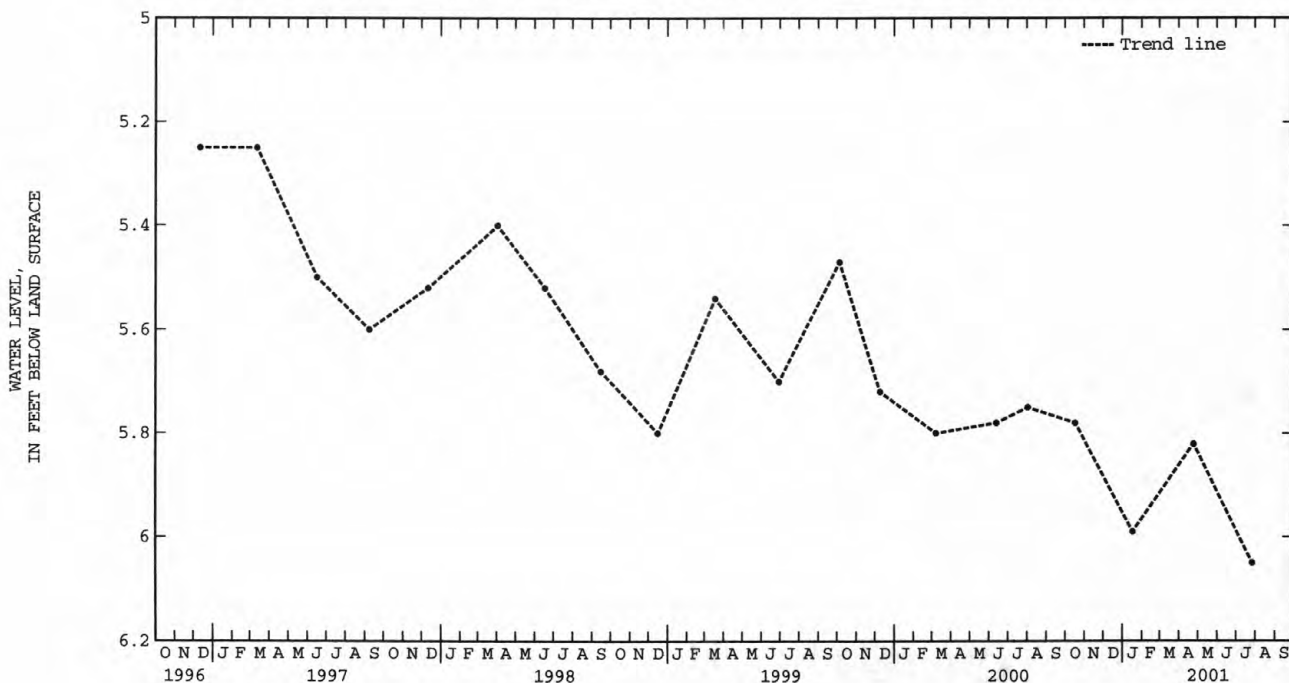
**DATUM.**--Elevation of land-surface datum is 12 ft above sea level, from topographic map. Measuring point: Top of casing, 0.6 ft above land-surface datum.

**PERIOD OF RECORD.**--January 1984 to current year. Unpublished records available prior to October 1987 in files of the Geological Survey.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 4.01 ft below land-surface datum, Sep. 18, 1985; lowest measured, 6.05 ft below land-surface datum, Jul. 27, 2001.

**WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001**

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 17	5.78	JAN 17	5.99	APR 24	5.82	JUL 27	6.05
WATER YEAR 2001		HIGHEST	5.78	OCT 17, 2000	LOWEST	6.05	JUL 27, 2001





## GROUND-WATER LEVELS

213

## PRINCE GEORGE COUNTY

370501077214401. Local number, 52E 2.

**LOCATION.**--Lat 37°05'02", long 77°21'43", NAD83, Hydrologic Unit 03010201, at Virginia Department of Transportation - Carson Area Headquarters, 1500 ft west of intersection of State Highway 35 and Interstate 95. Owner: U.S. Geological Survey.

**AQUIFER.**--Middle Potomac aquifer of Cretaceous age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 2 in., depth 69.47 ft, screened 64.47 ft to 69.47 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1998 to Oct. 1, 1999, occasional measurement with chalked tape by USGS personnel. Prior to Oct. 1, 1998, monthly measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 140 ft above sea level, from topographic map. Measuring point: Top of casing, 0.85 ft above land-surface datum.

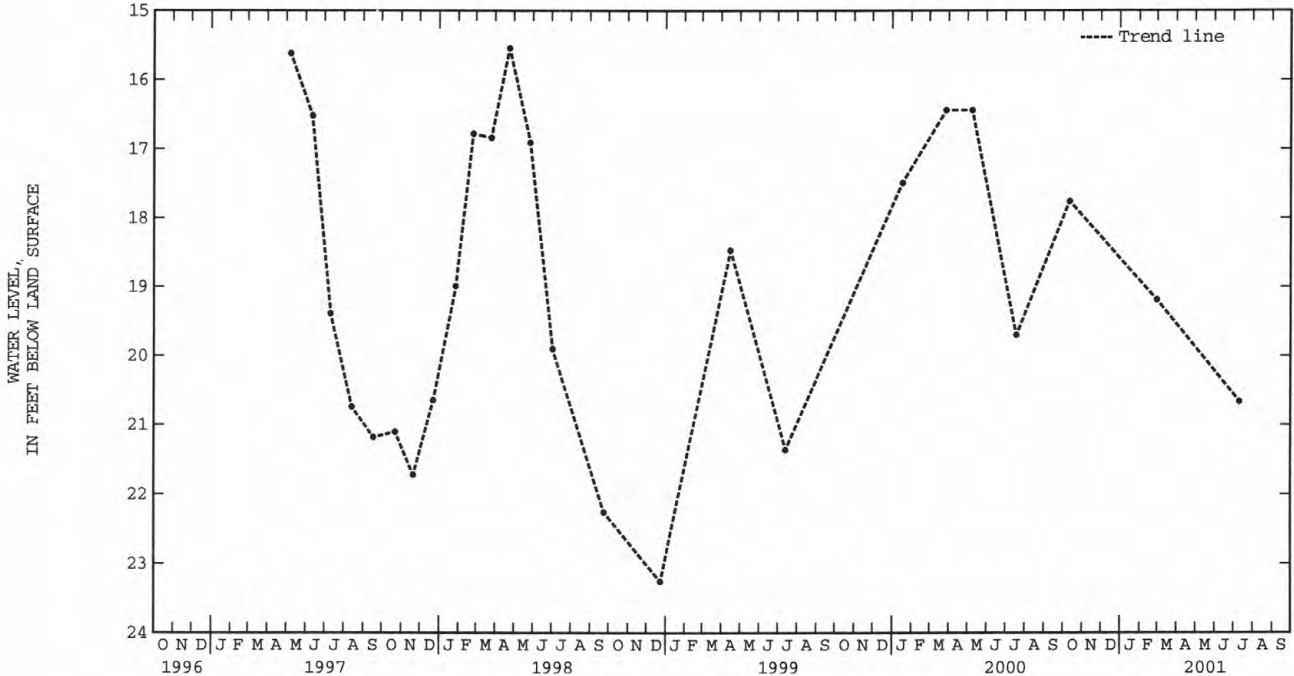
**REMARKS.**--Records provided by Virginia Department of Environmental Quality - Water Division.

**PERIOD OF RECORD.**--May 1997 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 15.54 ft below land-surface datum, Apr. 23, 1998; lowest measured, 23.26 ft below land-surface datum, Dec. 23, 1998.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 11	17.76	FEB 28	19.19	JUL 10	20.66
WATER YEAR 2001		HIGHEST	17.76	OCT 11, 2000	LOWEST
					20.66
				JUL 10, 2001	



## GROUND-WATER LEVELS

## PRINCE GEORGE COUNTY

371315077171901. Local number, 52F 1 SOW 038.

**LOCATION.**--Lat 37°13'16", long 77°17'18", NAD83, Hydrologic Unit 03010202, 0.1 mi north of State Highway 106 in Prince George.  
Owner: Prince George County.

**AQUIFER.**--Middle Potomac aquifer of Cretaceous age.

**WELL CHARACTERISTICS.**--Drilled unused water well, diameter 4 in., depth 180 ft, cased to 170 ft, open hole 170 to 180 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 10, 1985, to Jul. 10, 1995, bimonthly measurement with chalked tape. May 25, 1974, to Oct. 9, 1985, occasional measurement with chalked tape. Jan. 31, 1971, to May 25, 1974, continuous strip-chart recorder. Prior to Jan. 31, 1971, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 132 ft above sea level, from topographic map. Measuring point: Top of recorder shelf, 3.4 ft above land-surface datum.

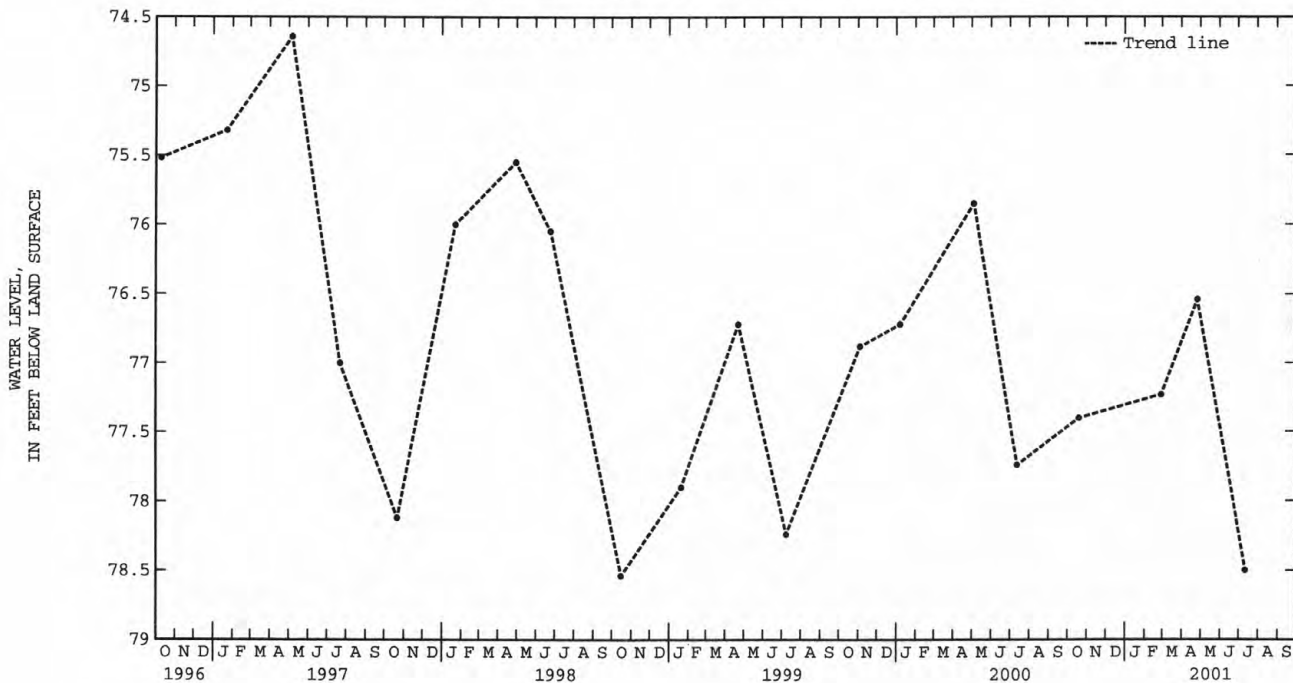
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

**PERIOD OF RECORD.**--December 1970 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 69.32 ft below land-surface datum, Feb. 4, 1980; lowest measured, 78.54 ft below land-surface datum, Oct. 15, 1998.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 19	77.40	FEB 27	77.23	APR 26	76.54	JUL 11	78.50
WATER YEAR 2001		HIGHEST	76.54	APR 26, 2001	LOWEST	78.50	JUL 11, 2001



## GROUND-WATER LEVELS

215

## PRINCE WILLIAM COUNTY

384931077420301. Local number, 49U 1.

**LOCATION.**--Lat 38°49'30", long 77°42'07", NAD83, Hydrologic Unit 02070010, 500 ft north of State Highway 55, 0.8 mi east of Thoroughfare Gap, and 3.7 mi west of Haymarket. Owner: Virginia Department of Transportation.

**AQUIFER.**--Waterfall Formation of Early Jurassic age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 7 in., depth 345 ft, cased to 20 ft, open hole 20 to 345 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by USGS personnel. Prior to February 1980, continuous strip-chart recorder.

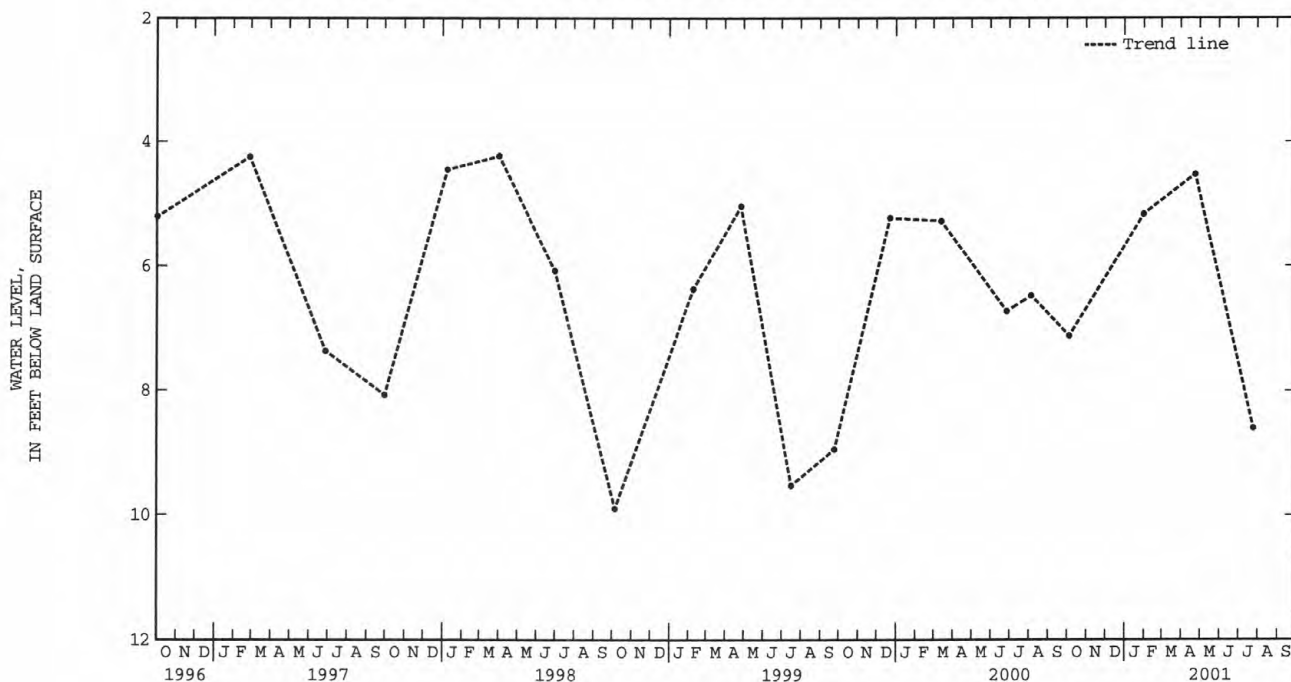
**DATUM.**--Elevation of land-surface datum is 383 ft above sea level, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum.

**PERIOD OF RECORD.**--October 1968 to current year. Unpublished records available prior to May 1969 in files of the Geological Survey.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level recorded, 2.59 ft below land-surface datum, Mar. 19, 1975; lowest measured, 10.33 ft below land-surface datum, Oct. 14, 1988.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 04	7.12	JAN 31	5.17	APR 23	4.53	JUL 25	8.60
WATER YEAR 2001		HIGHEST	4.53	APR 23, 2001	LOWEST	8.60	JUL 25, 2001



**GROUND-WATER LEVELS**  
**PRINCE WILLIAM COUNTY**

385607077381101. Local number, 49V 1.

**LOCATION.**--Lat 38°56'07", long 77°38'10", NAD83, Hydrologic Unit 02070010, near intersection of State Highways 600 and 615, 2.8 mi south of Aldie. Owner: J. H. Hutchison.

**AQUIFER.**--Turkey Run Formation of Early Jurassic age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 7 in., depth 165 ft, cased to 10 ft, open hole 10 to 165 ft.

**INSTRUMENTATION.**--Occasional measurements with chalked tape by USGS personnel. Jun. 19, 1979 to Oct. 1, 1995, digital recorder 60-minute punch. Prior to Jun. 19, 1979, continuous strip-chart recorder.

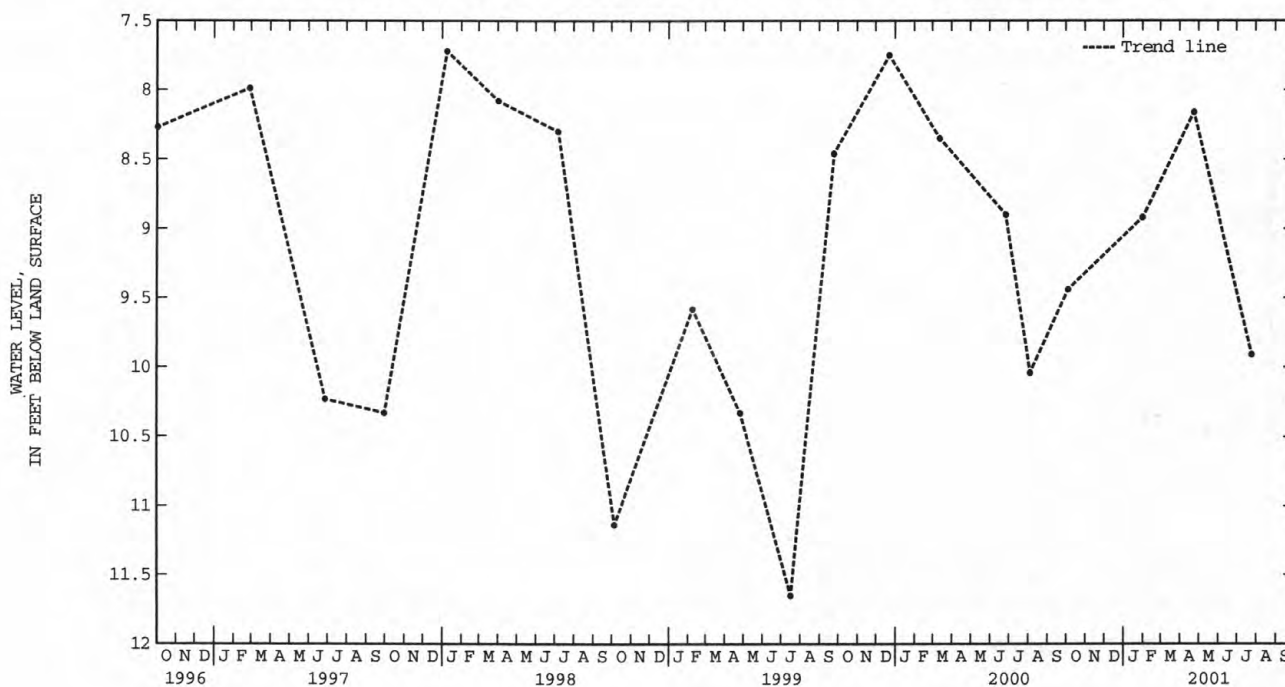
**DATUM.**--Elevation of land-surface datum is 420 ft above sea level, from topographic map. Measuring point: Top of casing, 1.0 ft above land-surface datum. Readings from 1979 to 1981 should be 0.7 ft lower than previously published.

**PERIOD OF RECORD.**--November 1968 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level recorded, 6.85 ft below land-surface datum, Oct. 12, 1979; lowest recorded, 13.09 ft below land-surface datum, Sep. 16, 1991.

**WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001**

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 04	9.44	JAN 31	8.92	APR 23	8.16	JUL 25	9.91
WATER YEAR 2001		HIGHEST	8.16	APR 23, 2001	LOWEST	9.91	JUL 25, 2001



## GROUND-WATER LEVELS

217

## PRINCE WILLIAM COUNTY

383423077245901. Local number, 51S 7.

**LOCATION.**--Lat 38°34'23", long 77°24'58", NAD83, Hydrologic Unit 02070011, in Prince William Forest Park, 700 ft north of State Highway 619, 0.7 mi southeast of Belfair Crossroads, and 4.6 mi south of Independent Hill. Owner: National Park Service.

**AQUIFER.**--Lunga Reservoir Formation of Cambrian age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 6 in., depth 490 ft, cased to 50 ft, open hole 50 to 490 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by USGS personnel. Dec. 21, 1982 to Feb. 1, 1996, digital recorder 60-minute punch. Prior to Dec. 21, 1982, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 295 ft above sea level, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum.

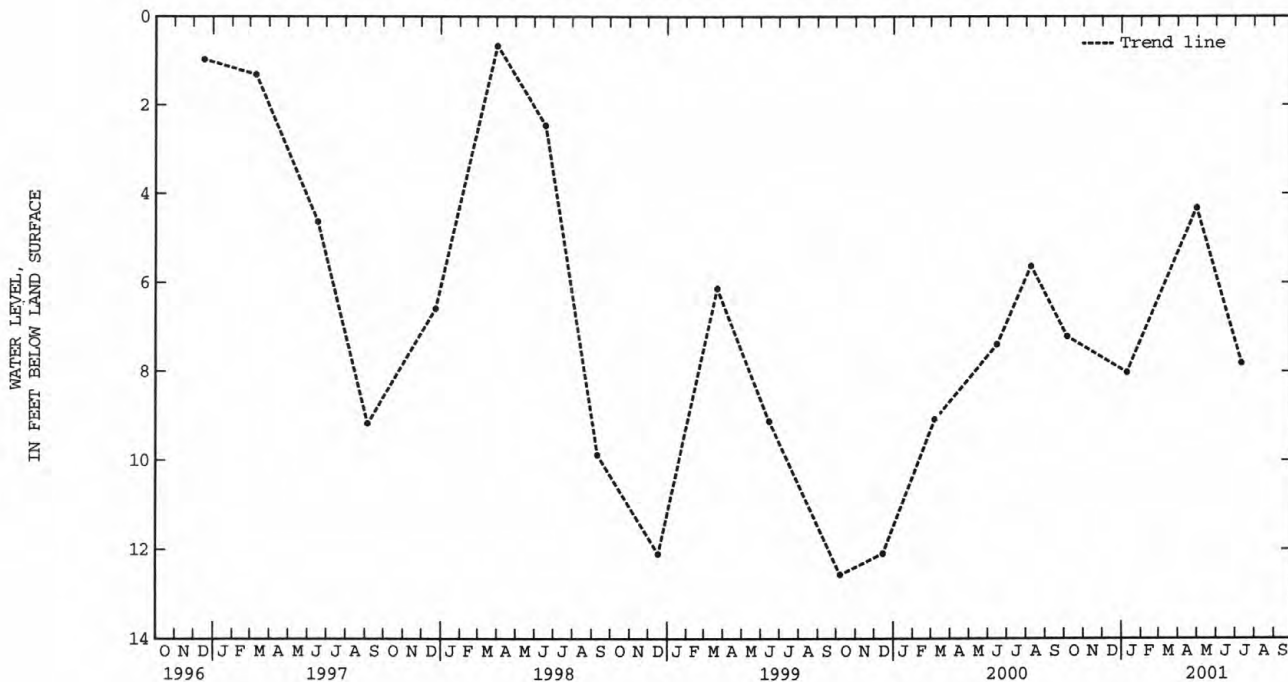
**PERIOD OF RECORD.**--September 1973 to November 1975, December 1977 to current year. Unpublished records available prior to December 1977 in files of the Geological Survey.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level recorded, 1.00 ft above land-surface datum, Mar. 29, 1994; lowest recorded, 12.95 ft below land-surface datum, Nov. 16, 17, 1988.

**CORRECTION.**--Highest water level for period of record, as published in the 1997-99 reports, was in error.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05	7.21	JAN 09	8.02	APR 30	4.32	JUL 11	7.81
WATER YEAR 2001		HIGHEST	4.32	APR 30, 2001	LOWEST	8.02	JAN 09, 2001



## GROUND-WATER LEVELS

## PRINCE WILLIAM COUNTY

383634077151301. Local number, 52S 4.

**LOCATION.**--Lat 38°36'34", long 77°15'12", NAD83, Hydrologic Unit 02070010, 193 ft east of Richmond, Fredericksburg, and Potomac (RFP) railroad tracks, 1.1 mi southeast of the intersection of U.S. Highway 1 and State Highway 636 (Featherstone Road), 1.4 mi south of the intersection of State Highway 636 (Featherstone Road) and RFP railroad tracks, and near Woodbridge. Owner: District of Columbia Department of Sanitary Engineering.

**AQUIFER.**--Middle Potomac aquifer of Cretaceous age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 10 in., depth 186 ft, screened 156 to 176 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by USGS personnel. Aug. 1, 1971, to Jul. 10, 1978, continuous strip-chart recorder. Prior to Aug. 1, 1971, occasional measurement with chalked tape.

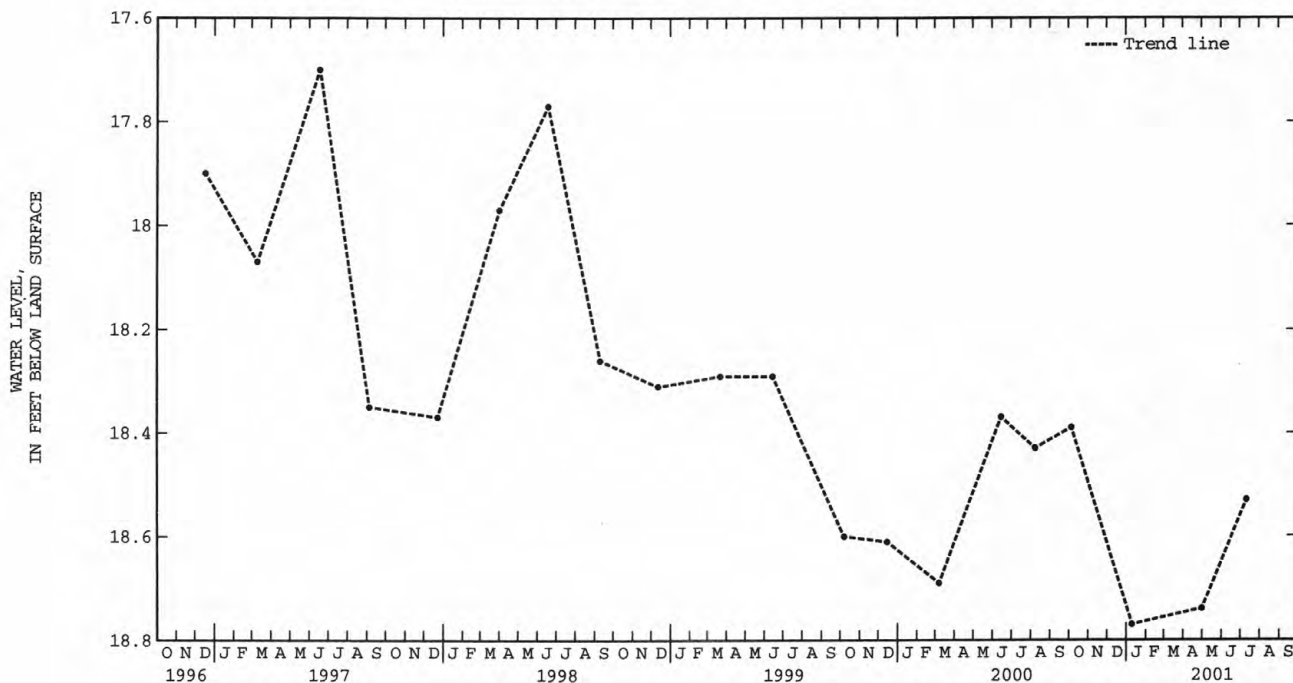
**DATUM.**--Elevation of land-surface datum is 28 ft above sea level, from topographic map. Measuring point: Top of casing, 3.3 ft above land-surface datum prior to Aug. 28, 1978; 1.9 ft thereafter.

**PERIOD OF RECORD.**--June 1969 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level recorded, 17.17 ft below land-surface datum, Apr. 28, 1973; lowest measured, 22.17 ft below land-surface datum, Jul. 1, 1969.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05	18.39	JAN 09	18.77	APR 30	18.74	JUL 11	18.53
WATER YEAR 2001		HIGHEST	18.39	OCT 05, 2000	LOWEST	18.77	JAN 09, 2001





# GROUND-WATER LEVELS

219

## PRINCE WILLIAM COUNTY

383830077135502. Local number, 53T 2 SOW 029.

**LOCATION.**--Lat 38°38'30", long 77°13'54", NAD83, Hydrologic Unit 02070010, at U.S. Army Woodbridge Research Facility, 1.5 mi east of Woodbridge. Owner: U.S. Department of the Army.

**AQUIFER.**--Lower Potomac aquifer of Cretaceous age.

**WELL CHARACTERISTICS.**--Drilled unused water well, diameter 10 in., depth 162 ft, screened 130 to 156 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by USGS personnel. Oct. 1, 1996 to Sep. 30, 1999, occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sep. 25, 1985, to Oct. 1, 1996, bimonthly measurement with chalked tape. Prior to Sep. 25, 1985, occasional measurement with chalked tape.

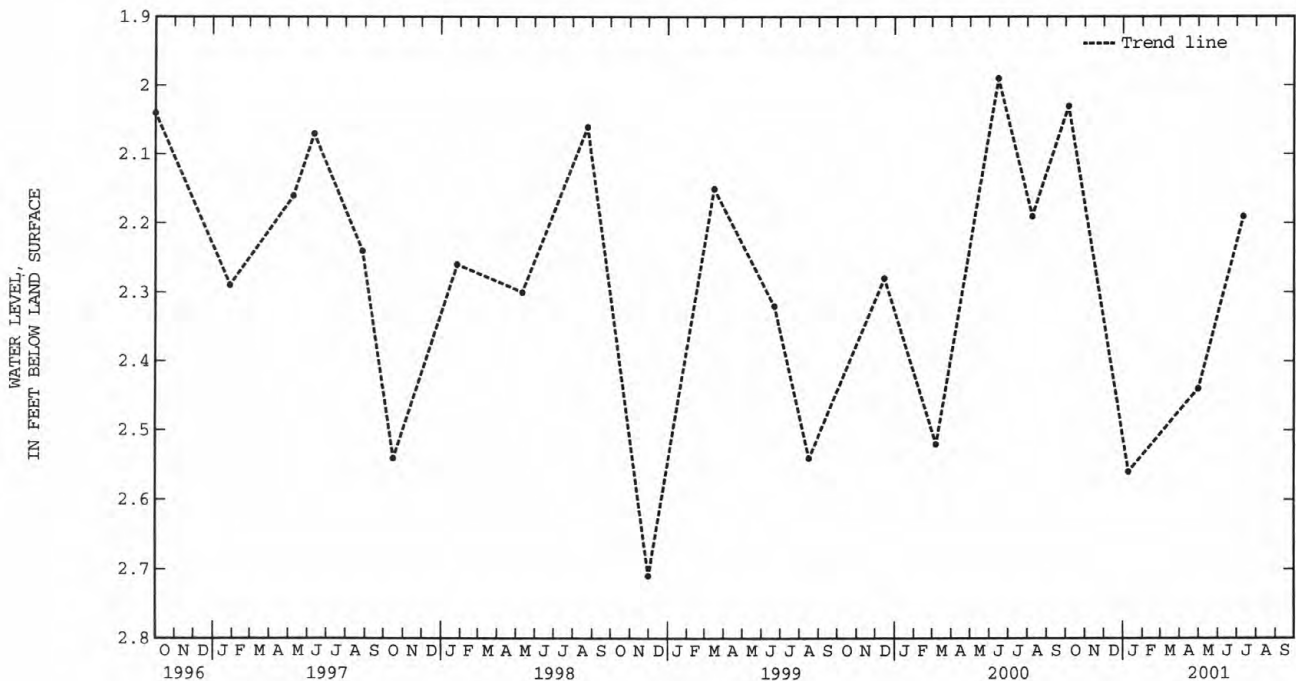
**DATUM.**--Elevation of land-surface datum is 5 ft above sea level, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum.

**PERIOD OF RECORD.**--March 1970 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 1.60 ft below land-surface datum, Apr. 4, 1973; lowest measured, 10.35 ft below land-surface datum, Oct. 12, 1977.

### WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05	2.03	JAN 09	2.56	APR 30	2.44	JUL 11	2.19
WATER YEAR 2001		HIGHEST	2.03	OCT 05, 2000	LOWEST	2.56	JAN 09, 2001



370254080374401. Local number, 25E 1 SOW 009.

**AQUIFER.**--Elbrook Formation of Middle to Late Cambrian age.

**WELL CHARACTERISTICS.**--Drilled unused water well, diameter 6 in., depth 318 ft, cased to 56 ft, open hole 56 to 318 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to Oct. 1, 1996, bimonthly measurement with chalked tape. Prior to Oct. 1, 1985, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 1,880 ft above sea level, from topographic map. Measuring point: Top of casing, at land-surface datum.

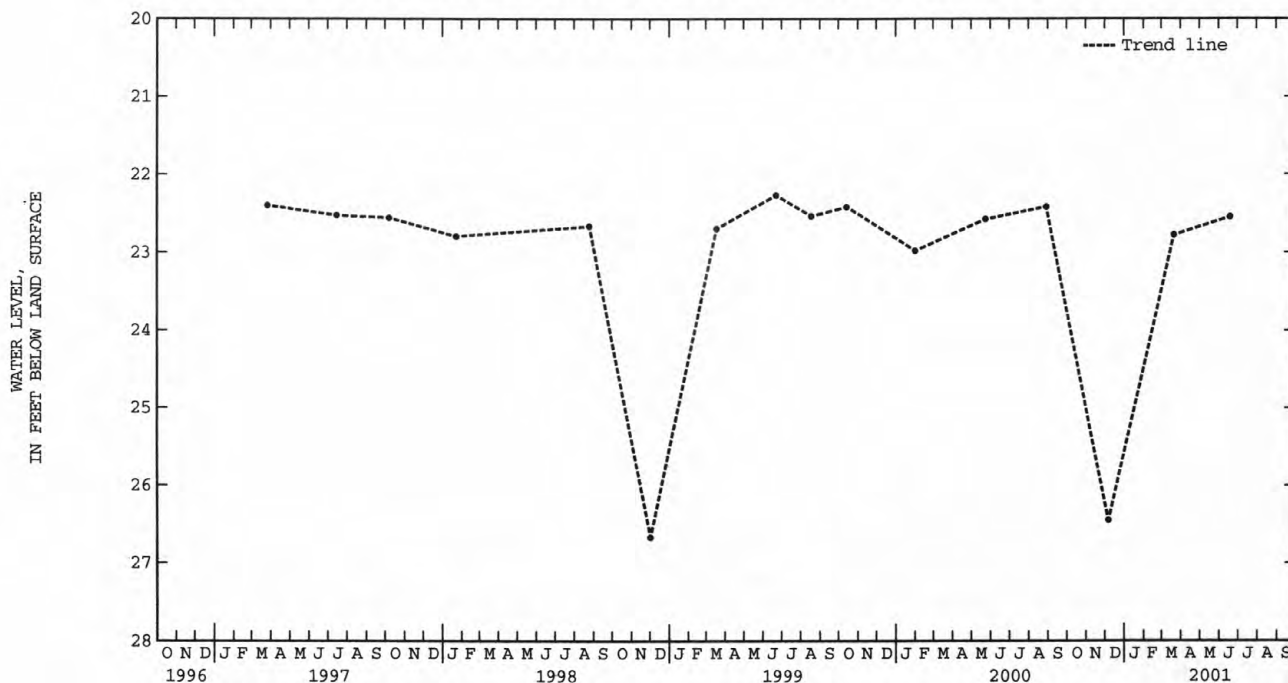
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Water from this well is known to contain concentrations of dissolved solids greater than 1,000 mg/L.

**PERIOD OF RECORD.**--October 1969 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 19.15 ft below land-surface datum, Mar. 31, Apr. 30, 1975; lowest measured, 27.25 ft below land-surface datum, Dec. 13, 1976.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL		
DEC 06	26.45	MAR 21	22.78	JUN 19	22.55		
WATER YEAR 2001		HIGHEST	22.55	JUN 19, 2001	LOWEST	26.45	DEC 06, 2000



## GROUND-WATER LEVELS

221

## PULASKI COUNTY

370516080411501. Local number, 25E 2 SOW 059.

**LOCATION.**--Lat 37°05'16", long 80°41'14", NAD83, Hydrologic Unit 05050001, 400 ft east of State Highway 100, 0.5 mi south of Dublin. Owner: Town of Dublin.

**AQUIFER.**--Conococheague Formation of Late Cambrian age.

**WELL CHARACTERISTICS.**--Drilled unused water well, diameter 4 in., depth 370 ft, length of casing unknown.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to Oct. 1, 1996, bimonthly measurement with chalked tape. Jul. 20, 1974, to Oct. 1, 1985, occasional measurement with chalked tape. Prior to Jul. 20, 1974, continuous strip-chart recorder.

**DATUM.**--Elevation of land-surface datum is 2,170 ft above sea level, from topographic map. Measuring point: Top of casing, at land-surface datum.

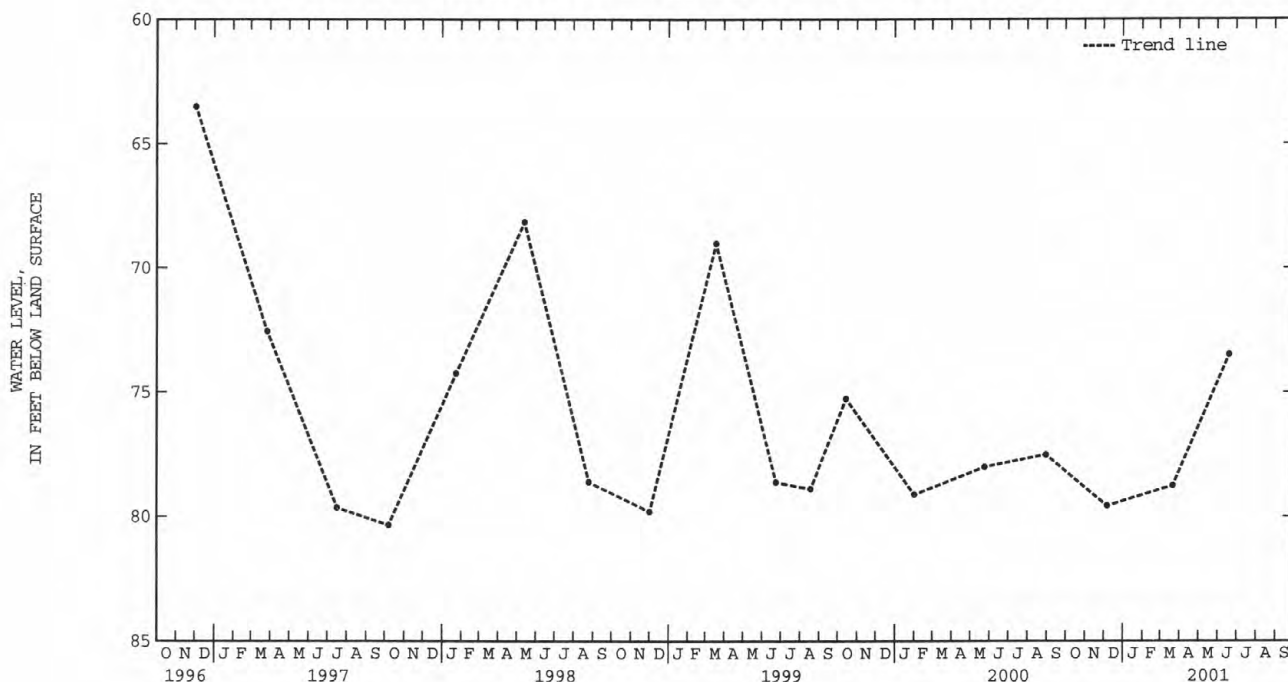
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division.

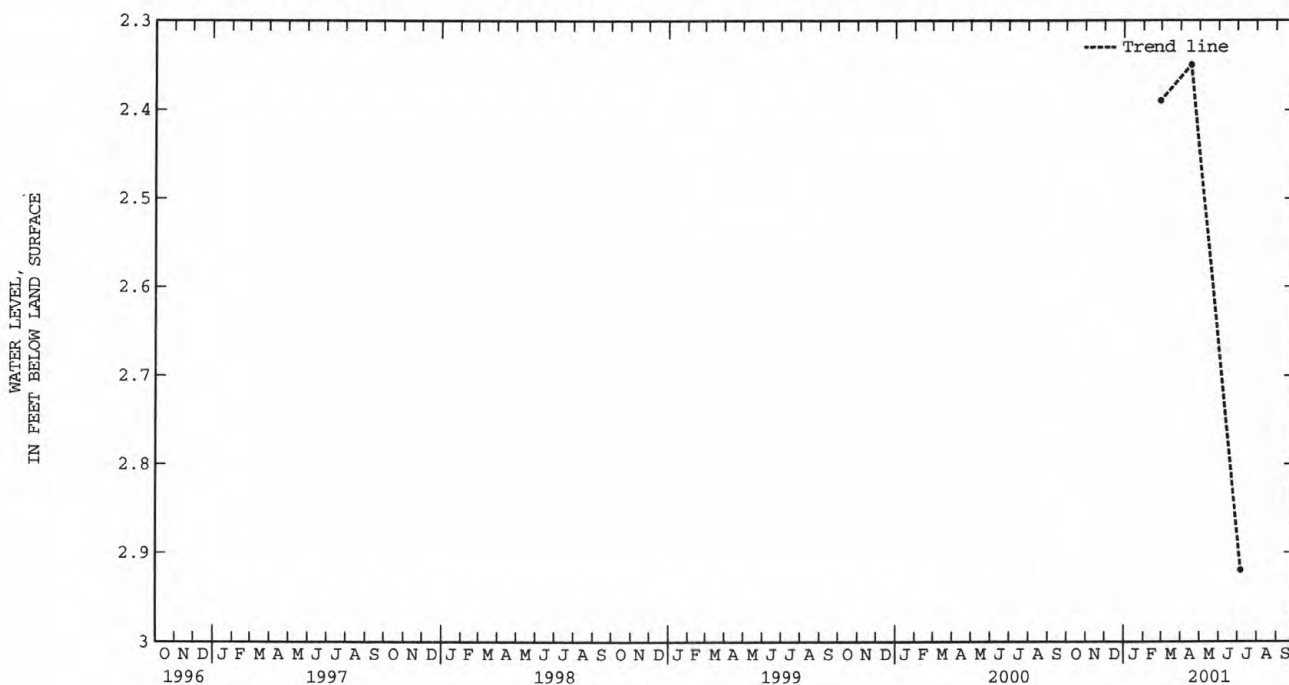
**PERIOD OF RECORD.**--April 1972 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level recorded, 60.00 ft below land-surface datum, Mar. 18, 1973; lowest measured, 82.50 ft below land-surface datum, Oct. 5, 1982.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL		
DEC 06	79.58	MAR 21	78.76	JUN 19	73.49		
WATER YEAR 2001		HIGHEST	73.49	JUN 19, 2001	LOWEST	79.58	DEC 06, 2000





## GROUND-WATER LEVELS

223

## CITY OF ROANOKE

371653079552101. Local number, 31G 1 SOW 008.

**LOCATION.**--Lat 37°16'53", long 79°55'20", NAD83, Hydrologic Unit 03010101, 700 ft south of intersection of 10th Street and Orange Avenue in Roanoke. Owner: Nelson-Roanoke Corporation.

**AQUIFER.**--Rome Formation of Cambrian age. Prior to 1974, reported as Elbrook Formation.

**WELL CHARACTERISTICS.**--Drilled unused water well, diameter 6 in., depth 48 ft, length of casing unknown.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to Oct. 1, 1996, bimonthly measurement with chalked tape. Jul. 20, 1974, to Sep. 30, 1985, occasional measurement with chalked tape. Prior to Jul. 20, 1974, continuous strip-chart recorder.

**DATUM.**--Elevation of land-surface datum is 930 ft above sea level, from topographic map. Measuring point: Top of casing, 0.94 ft above land-surface datum.

**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division.

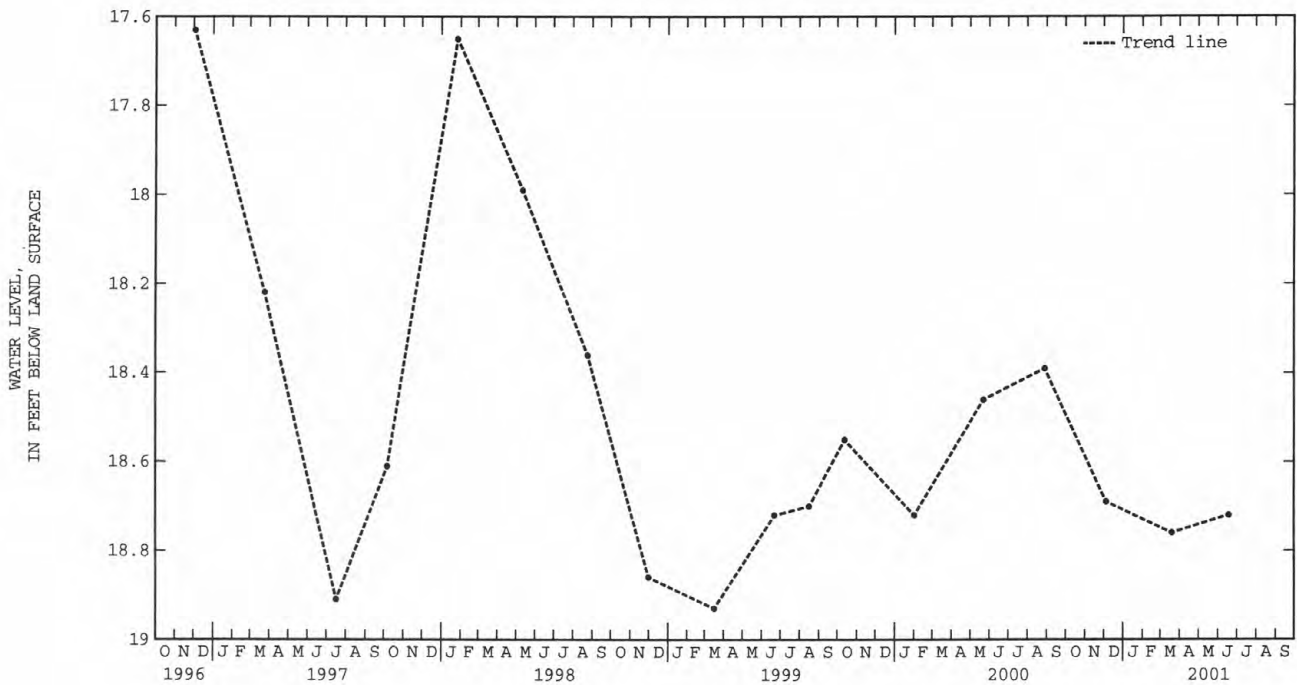
**PERIOD OF RECORD.**--August 1966 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 12.36 ft below land-surface datum, Feb. 18, 1986; lowest measured, 19.29 ft below land-surface datum, Jun. 23, 1987.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 04	18.69	MAR 19	18.76	JUN 18	18.72

WATER YEAR 2001	HIGHEST	18.69	DEC 04, 2000	LOWEST	18.76	MAR 19, 2001
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## GROUND-WATER LEVELS

## ROCKBRIDGE COUNTY

373758079271601. Local number, 35K 1 SOW 063.

**LOCATION.**--Lat 37°37'58", long 79°27'15", NAD83, Hydrologic Unit 02080202, 0.35 mi northwest of intersection of State Highways 130 and 684 in Glasgow. Owner: Town of Glasgow.

**AQUIFER.**--Rome Formation of Cambrian age.

**WELL CHARACTERISTICS.**--Drilled unused water well, diameter 6 in., depth 695 ft, cased to 101 ft, open hole from 101 to 695 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel, prior to Oct. 1, 1995 continuous strip-chart recorder.

**DATUM.**--Elevation of land-surface datum is 745 ft above sea level, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum.

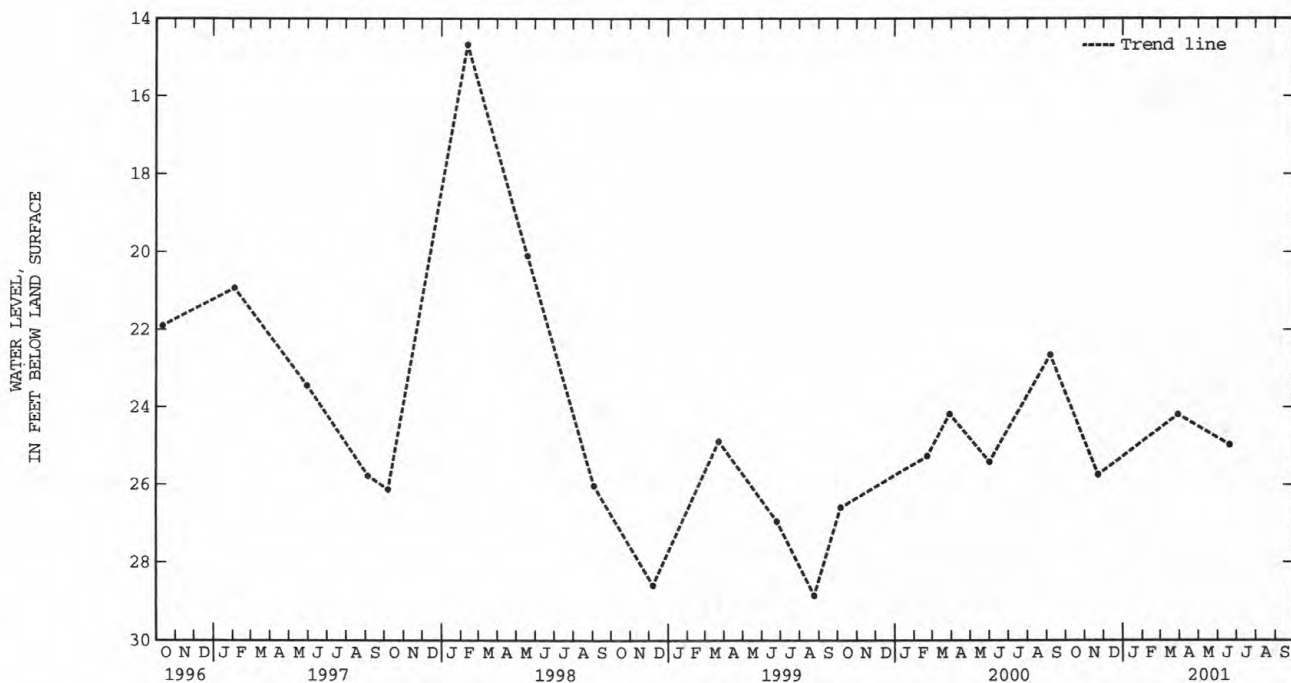
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division.

**PERIOD OF RECORD.**--June 1972 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level recorded, 14.27 ft below land-surface datum, Apr. 29, 1987; lowest recorded, 29.13 ft below land-surface datum, Dec. 13, 14, 1981.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 22	25.75	MAR 29	24.19	JUN 20	24.97
WATER YEAR 2001		HIGHEST	24.19	MAR 29, 2001	LOWEST
					25.75
					NOV 22, 2000





## GROUND-WATER LEVELS

225

## ROCKINGHAM COUNTY

382150078424001. Local number, 41Q 1.

**LOCATION.**--Lat 38°21'50", long 78°42'39", NAD83, Hydrologic Unit 02070005, at Virginia Department of Transportation garage, 1.3 mi southeast of McGaheysville. Owner: U.S. Geological Survey.

**AQUIFER.**--Conococheague Formation of Late Cambrian age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 6.25 in., depth 310 ft, cased to 131 ft, open hole 131 to 310 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by USGS personnel. Jun. 27, 1979 to Oct. 1, 1995, digital recorder 60-minute punch. Prior to Jun. 27, 1979, continuous strip-chart recorder.

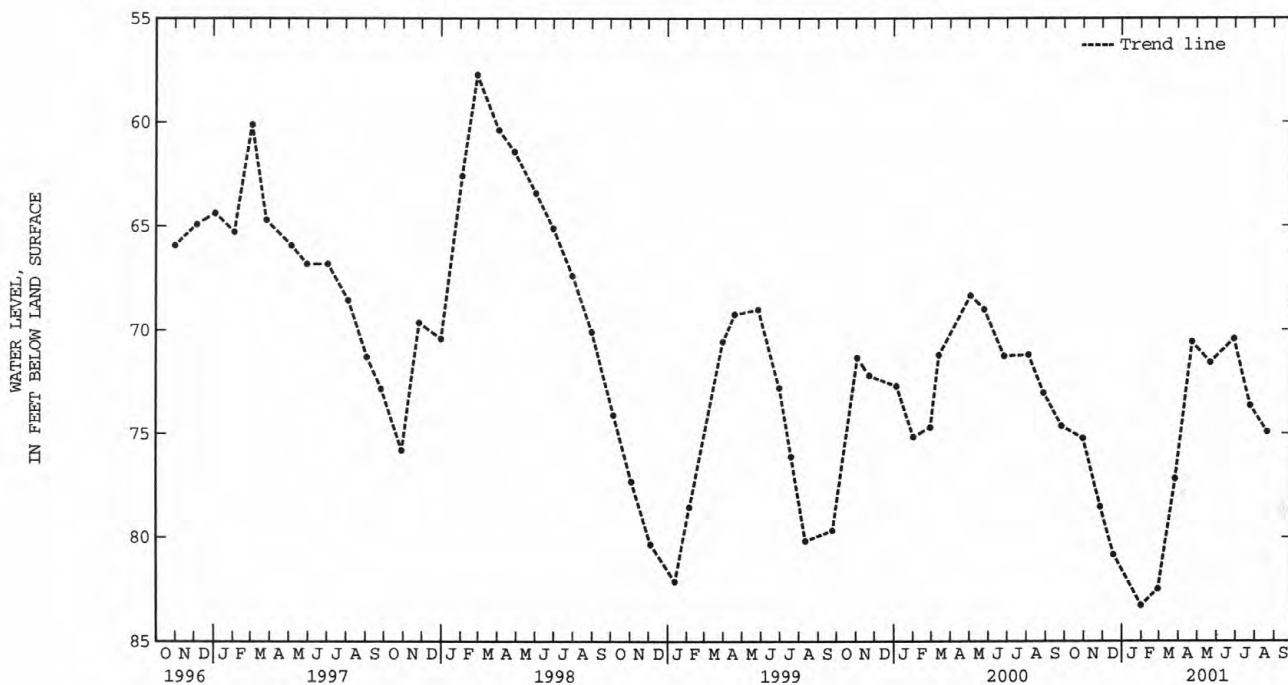
**DATUM.**--Elevation of land-surface datum is 1,105 ft above sea level, from topographic map. Measuring point: Top of casing 2.4 ft above land-surface datum. Prior to Feb. 27, 1996, top edge of recorder shelf, 3.5 ft above land-surface datum.

**PERIOD OF RECORD.**--August 1970 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 57.73 ft below land-surface datum, Feb. 27, 1998; lowest recorded, 88.08 ft below land-surface datum, Jan. 14, 1989.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30	75.23	DEC 18	80.82	FEB 27	82.48	APR 23	70.58	JUN 29	70.44	AUG 21	74.92
NOV 27	78.51	JAN 31	83.27	MAR 27	77.16	MAY 22	71.58	JUL 25	73.66		
WATER YEAR 2001		HIGHEST	70.44	JUN 29, 2001	LOWEST	83.27	JAN 31, 2001				



**LOCATION.**--Lat 36°41'10", long 77°23'06", NAD83, Hydrologic Unit 03010201, 150 ft, west of the intersection of U.S. Highway 58 and State Highway 615, and 0.5mi south of Adams Grove. Owner: U.S. Geological Survey.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 175 ft., screened 165 to 175 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by USGS personnel. July 1977 to September 1995, digital recorder 60-minute punch. July 1975 to July 1977 continous strip-chart recorder. Prior to July 1975 occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 126 ft, above sea level, from topographic map. Measuring point: top of recorder shelf, 3.12 ft above land-surface datum.

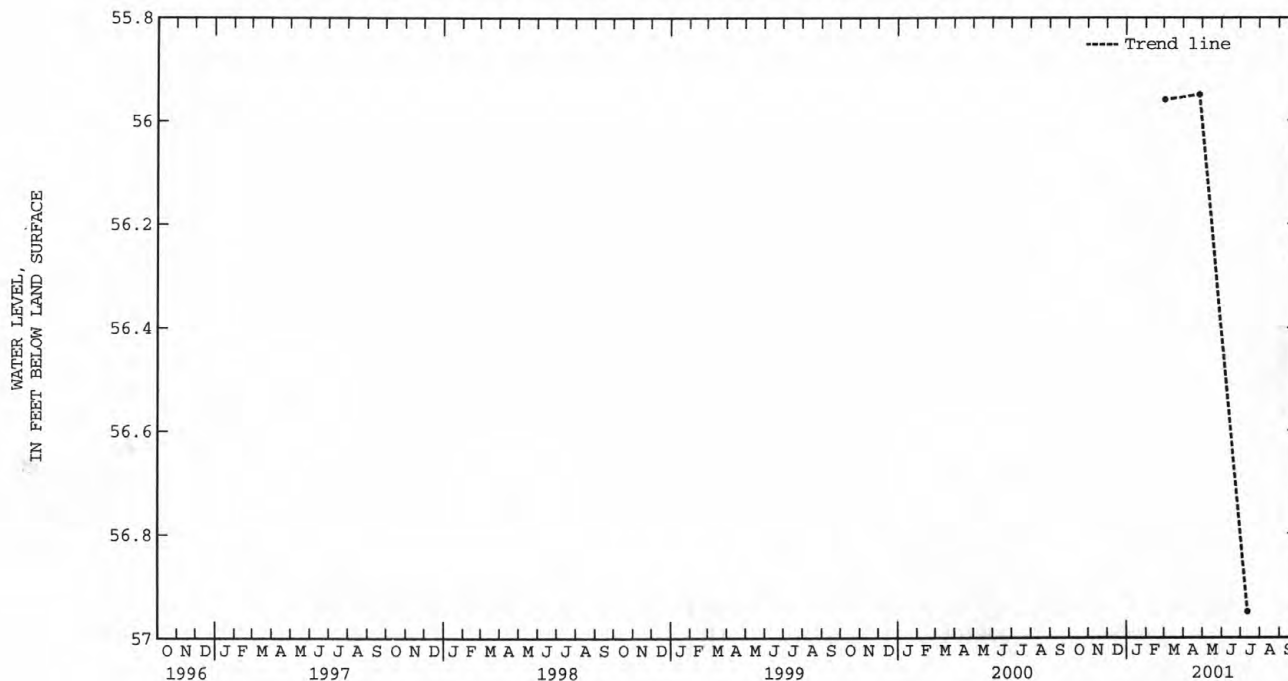
REMARKS.--Water level may be affected by regional drawdown. The depth of the well was reported incorrectly as 253 ft, for the period October 1981 to September 1993.

**PERIOD OF RECORD.**--October 1974 to September 1995. March 2001 to September 2001.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level recorded, 54.21 ft, below land-surface datum, Apr. 30, 1978; lowest recorded, 60.03 ft below land-surface datum. Oct. 24, 25, 1981.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM. WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL		
MAR 02	55.96	APR 26	55.95	JUL 12	56.95		
WATER YEAR 2001		HIGHEST	55.95	APR 26, 2001	LOWEST	56.95	JUL 12, 2001



## GROUND-WATER LEVELS

227

## SOUTHAMPTON COUNTY

363410077150801. Local number, 52A 1.

**LOCATION.**--Lat 36°34'11", long 77°15'07", NAD83, Hydrologic Unit 03010204, along Seaboard Coastline railroad, 0.15 mi northwest of intersection of State Highways 195 and 701 in Branchville. Owner: L. W. Grizzard.

**AQUIFER.**--Middle Potomac aquifer of Cretaceous age.

**WELL CHARACTERISTICS.**--Drilled withdrawal water well, diameter 4 in., depth 217 ft, screened 204 to 217 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by USGS personnel.

**DATUM.**--Elevation of land-surface datum is 44 ft above sea level, from topographic map. Measuring point: Top of casing, 0.8 ft above land-surface datum.

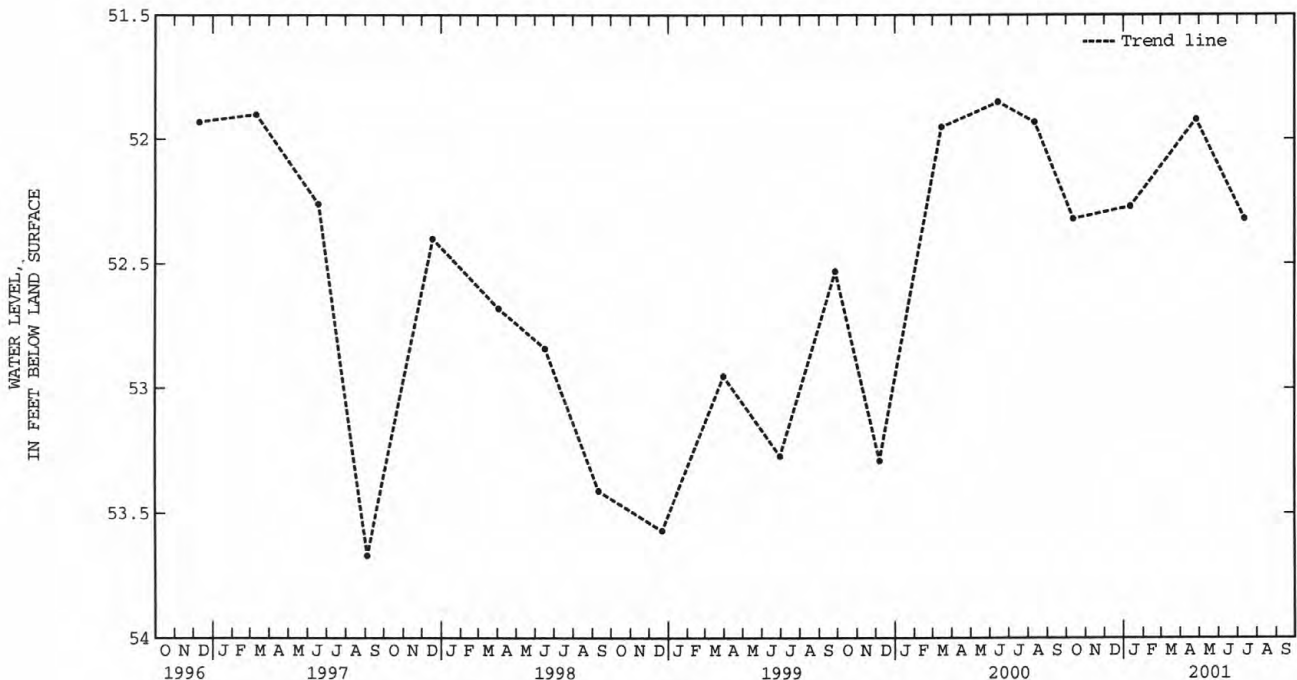
**REMARKS.**--Water level affected by regional drawdown.

**PERIOD OF RECORD.**--September 1970 to December 1975, January 1978 to current year. Unpublished records available prior to October 1985 in files of the Geological Survey.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 32.85 ft below land-surface datum, Sep. 9, 1970; lowest measured, 53.70 ft below land-surface datum, Sep. 20, 1995.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 12	52.32	JAN 11	52.27	APR 26	51.92	JUL 12	52.32
WATER YEAR 2001		HIGHEST	51.92	APR 26, 2001	LOWEST	52.32	OCT 12, 2000 JUL 12, 2001



## GROUND-WATER LEVELS

## SOUTHAMPTON COUNTY

363916077201001. Local number, 52B 8 SOW 178A.

**LOCATION.**--Lat 36°39'17", long 77°20'09", NAD83, Hydrologic Unit 03010204, 0.25 mi northeast of State Highway 661, 0.6 mi south of the intersection of State Highways 652 and 661, and 4.5 mi southeast of Drewryville. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Newark Supergroup sandstone of Jurassic and Triassic age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 316 ft, screened 285 to 295 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by USGS personnel.

**DATUM.**--Elevation of land-surface datum is 120 ft above sea level, from topographic map. Measuring point: Top of casing, 1.6 ft above land-surface datum.

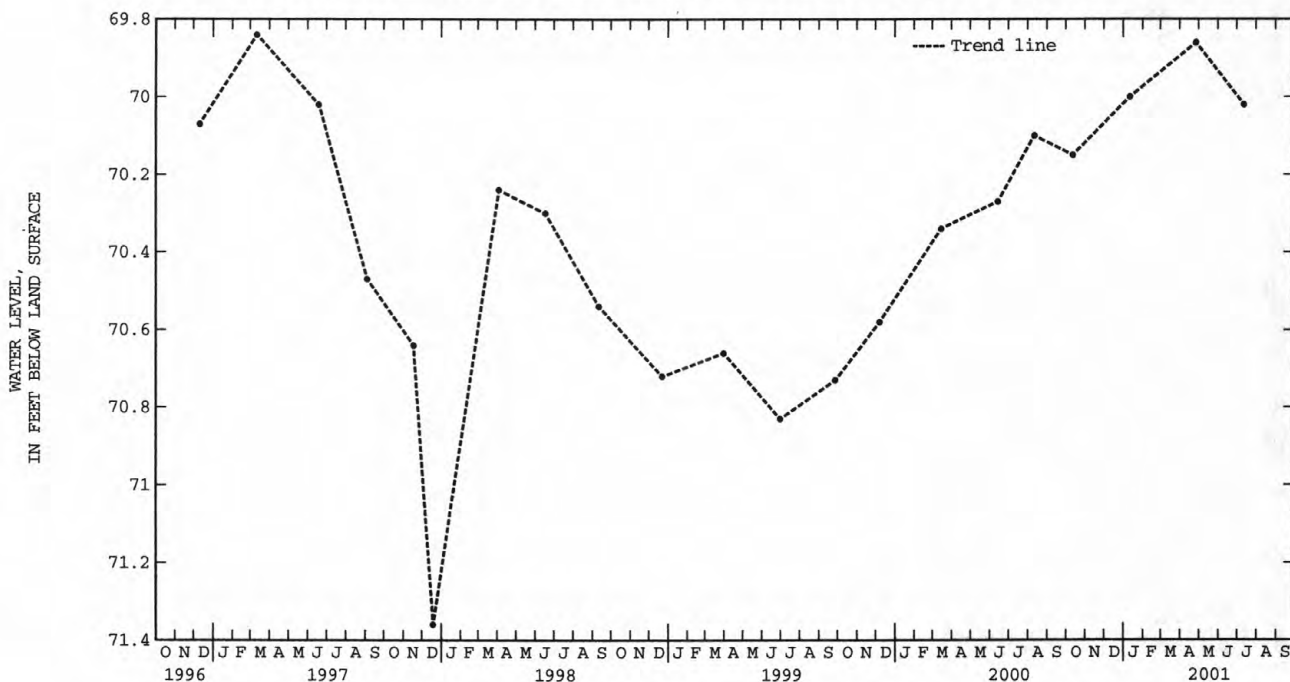
**REMARKS.**--Water level may be affected by regional drawdown. Water from this well is known to contain concentrations of dissolved solids greater than 1,000 mg/L.

**PERIOD OF RECORD.**--March 1988 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 69.30 ft below land-surface datum, Mar. 15, 1990; lowest measured, 71.39 ft below land-surface datum, Sep. 20, 1995.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 12	70.15	JAN 11	70.00	APR 26	69.86	JUL 12	70.02
WATER YEAR 2001		HIGHEST	69.86	APR 26, 2001		LOWEST	70.15
							OCT 12, 2000



## GROUND-WATER LEVELS

229

## SOUTHAMPTON COUNTY

363916077201004. Local number, 52B 11 SOW 178D.

**LOCATION.**--Lat 36°39'17", long 77°20'09", NAD83, Hydrologic Unit 03010204, 0.25 mi northeast of State Highway 661, 0.6 mi south of intersection of State Highways 652 and 661, and 4.5 mi southeast of Drewryville. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Middle Potomac aquifer of Cretaceous age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 190 ft, screened 160 to 170 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by USGS personnel. Prior to November 1987, digital recorder 60-minute punch.

**DATUM.**--Elevation of land-surface datum is 120 ft above sea level, from topographic map. Measuring point: Top of casing, 2.1 ft above land-surface datum.

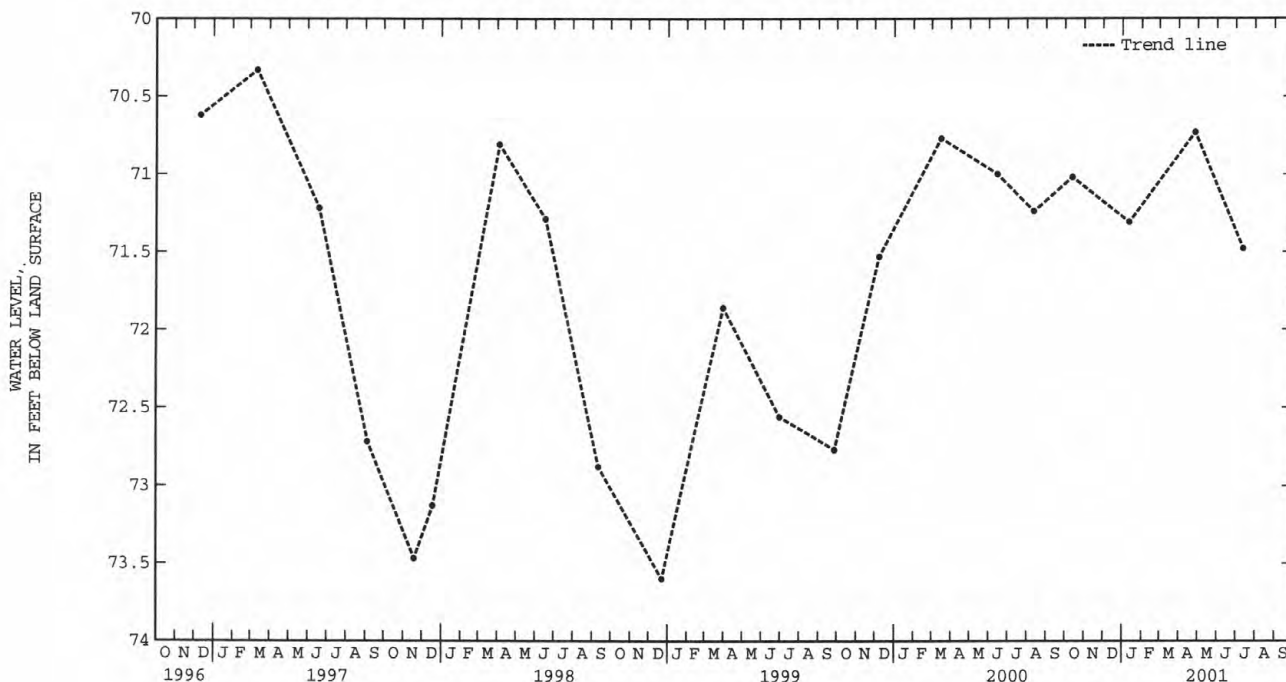
**REMARKS.**--Water level may be affected by regional drawdown.

**PERIOD OF RECORD.**--December 1985 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level recorded, 69.81 ft below land-surface datum, Apr. 16, 1987; lowest recorded, 73.89 ft below land-surface datum, Sep. 20, 1995.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 12	71.02	JAN 11	71.31	APR 26	70.73	JUL 12	71.48
WATER YEAR 2001		HIGHEST	70.73	APR 26, 2001		LOWEST	71.48 JUL 12, 2001



## GROUND-WATER LEVELS

## SOUTHAMPTON COUNTY

363916077201005. Local number, 52B 12 SOW 178E.

**LOCATION.**--Lat 36°39'17", long 77°20'09", NAD83, Hydrologic Unit 03010204, 0.25 mi northeast of State Highway 661, 0.6 mi south of intersection of State Highways 652 and 661, and 4.5 mi southeast of Drewryville. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Middle Potomac aquifer of Cretaceous age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 135 ft, screened 120 to 130 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by USGS personnel. Prior to November 1987, digital recorder 60-minute punch.

**DATUM.**--Elevation of land-surface datum is 120 ft above sea level, from topographic map. Measuring point: Top of casing, 2.2 ft above land-surface datum.

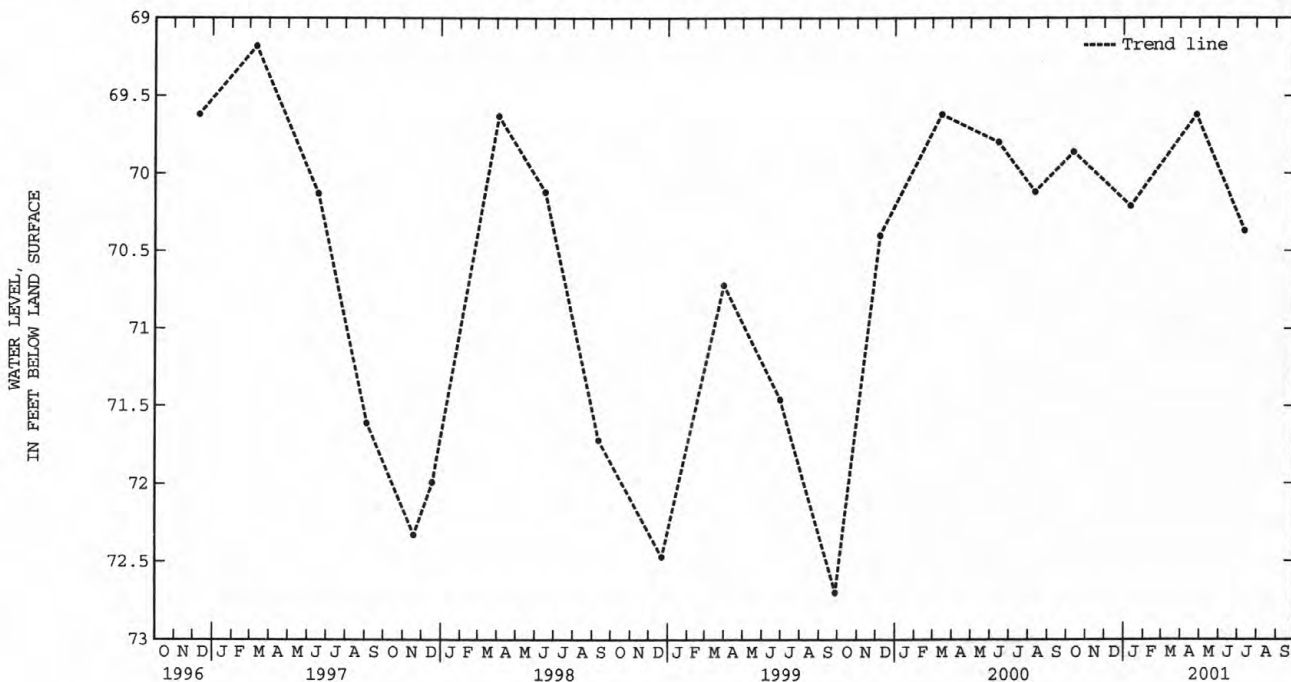
**REMARKS.**--Water level may be affected by regional drawdown.

**PERIOD OF RECORD.**--December 1985 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level recorded, 68.75 ft below land-surface datum, Apr. 16, 1987; lowest recorded, 72.86 ft below land-surface datum, Sep. 20, 1995.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 12	69.86	JAN 11	70.21	APR 26	69.62	JUL 12	70.37
WATER YEAR 2001		HIGHEST	69.62	APR 26, 2001		LOWEST	70.37 JUL 12, 2001





## GROUND-WATER LEVELS

231

## SOUTHAMPTON COUNTY

363916077201006. Local number, 52B 13 SOW 178F.

**LOCATION.**--Lat 36°39'17", long 77°20'09", NAD83, Hydrologic Unit 03010204, 0.25 mi northeast of State Highway 661, 0.6 mi south of intersection of State Highways 652 and 661, and 4.5 mi southeast of Drewryville. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Yorktown-Eastover aquifer of Miocene-Pliocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 65 ft, screened 40 to 50 ft.

**INSTRUMENTATION.**--Occasional measurements with chalked tape by USGS personnel. Prior to November 1987, digital recorder 60-minute punch.

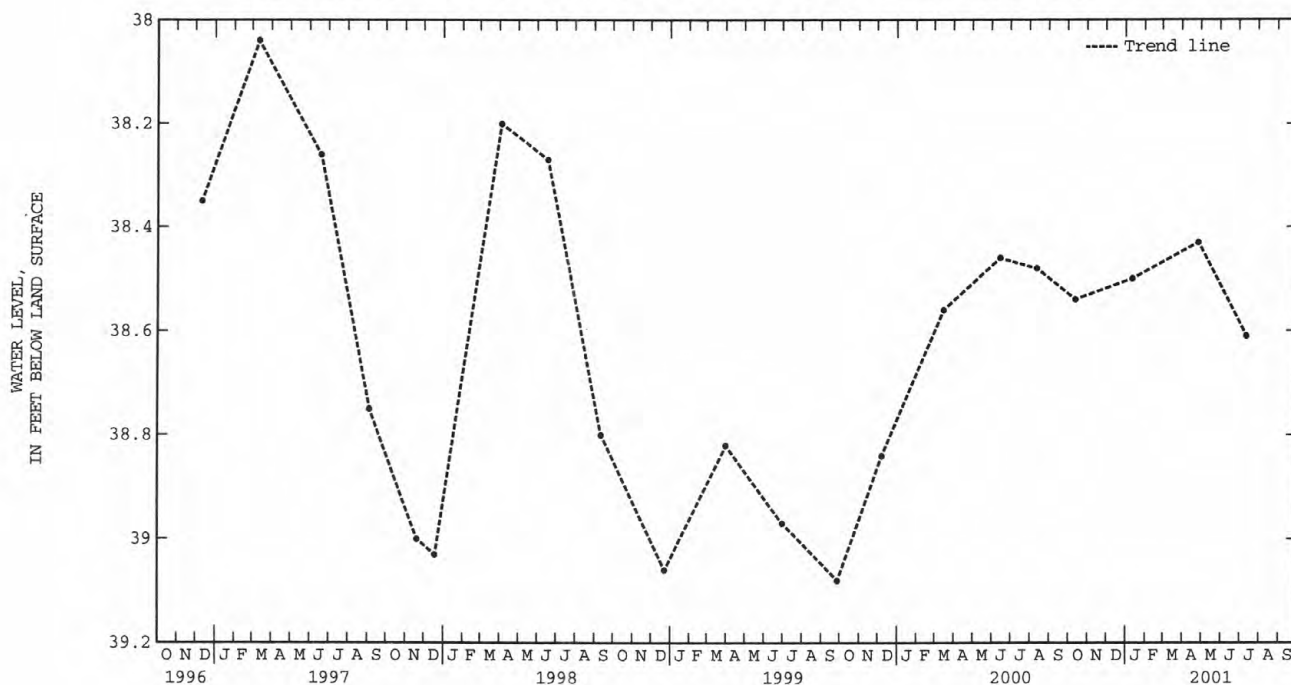
**DATUM.**--Elevation of land-surface datum is 120 ft above sea level, from topographic map. Measuring point: Top of casing, 2.9 ft above land-surface datum.

**PERIOD OF RECORD.**--December 1985 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level recorded, 37.90 ft below land-surface datum, Apr. 29, 1987; lowest recorded, 43.77 ft below land-surface datum, Oct. 6-9, 1987.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 12	38.54	JAN 11	38.50	APR 26	38.43	JUL 12	38.61
WATER YEAR 2001		HIGHEST	38.43	APR 26, 2001		LOWEST	38.61 JUL 12, 2001



## GROUND-WATER LEVELS

## SOUTHAMPTON COUNTY

364242077121501. Local number, 53B 6.

**LOCATION.**--Lat 36°42'43", long 77°12'14", NAD83, Hydrologic Unit 03010201, at Virginia Department of Transportation - Capron Area Headquarters, 50 ft east of State Highway 654 and 2000 ft north of U.S. Highway 58. Owner: U.S. Geological Survey.

**AQUIFER.**--Brighseat-upper Potomac aquifer of Cretaceous-Paleocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 2 in., depth 115.65 ft, screened 110.65 ft to 115.65 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1998 to Oct. 1, 1999, occasional measurement with chalked tape by USGS personnel. Prior to Oct. 1, 1998, monthly measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 95 ft above sea level, from topographic map. Measuring point: Top of casing, 0.88 ft above land-surface datum.

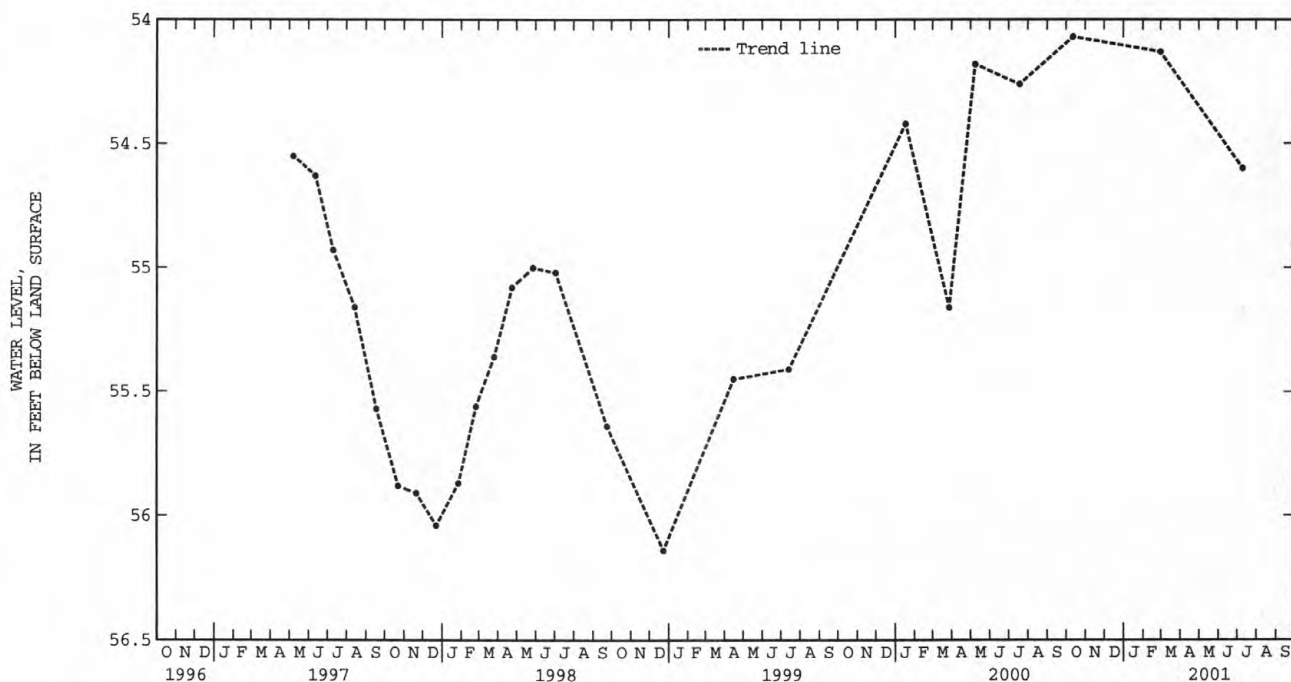
**REMARKS.**--Records provided by Virginia Department of Environmental Quality - Water Division. Well drilled as part of Fall Zone ground-water study.

**PERIOD OF RECORD.**--May 1997 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 54.07 ft below land-surface datum, Oct. 11, 2000; lowest measured, 56.14 ft below land-surface datum, Dec. 23, 1998.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL		
OCT 11	54.07	FEB 28	54.13	JUL 10	54.60		
WATER YEAR 2001		HIGHEST	54.07	OCT 11, 2000	LOWEST	54.60	JUL 10, 2001



## GROUND-WATER LEVELS

233

## SOUTHAMPTON COUNTY

364242077121502. Local number, 53B 7.

**LOCATION.**--Lat 36°42'43", long 77°12'14", NAD83, Hydrologic Unit 03010201, at Virginia Department of Transportation - Capron Area Headquarters, 50 ft east of State Highway 654 and 2000 ft north of U.S. Highway 58. Owner: U.S. Geological Survey.

**AQUIFER.**--Brighseat-upper Potomac aquifer of Cretaceous-Paleocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 2 in., depth 80.77 ft, screened 75.77 ft to 80.77 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1998 to Oct. 1, 1999, occasional measurement with chalked tape by USGS personnel. Prior to Oct. 1, 1998, monthly measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 95 ft above sea level, from topographic map. Measuring point: Top of casing, 0.82 ft above land-surface datum.

**REMARKS.**--Records provided by Virginia Department of Environmental Quality - Water Division. Well drilled as part of Fall Zone ground-water study.

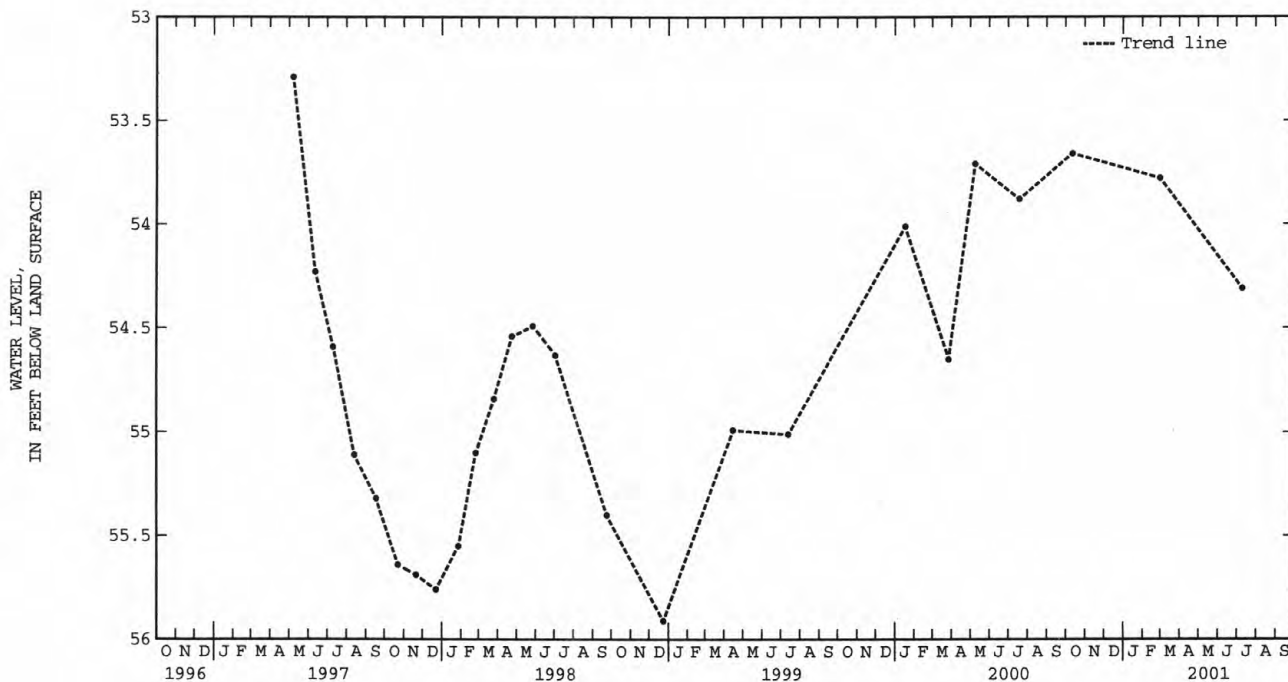
**PERIOD OF RECORD.**--May 1997 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 53.29 ft below land-surface datum, May 7, 1997; lowest measured, 55.91 ft below land-surface datum, Dec. 23, 1998.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 11	53.66	FEB 28	53.78	JUL 10	54.31

WATER YEAR 2001	HIGHEST	53.66	OCT 11, 2000	LOWEST	54.31	JUL 10, 2001
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**GROUND-WATER LEVELS**  
**SOUTHAMPTON COUNTY**

363722077014601. Local number, 54A 1.

**LOCATION.**--Lat 36°37'23", long 77°01'45", NAD83, Hydrologic Unit 03010201, 100 ft west of State Highway 681, 0.5 mi north of intersection of State Highways 672 and 681, and 2.4 mi north of Sunbeam. Owner: William Britt.

**AQUIFER.**--Brightseat-upper Potomac aquifer of Cretaceous-Paleocene age.

**WELL CHARACTERISTICS.**--Drilled withdrawal water well, diameter 4 in., depth 254 ft, screened 244 to 254 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by USGS personnel.

**DATUM.**--Elevation of land-surface datum is 35 ft above sea level, from topographic map. Measuring point: Top of casing, 1.03 ft above land-surface datum.

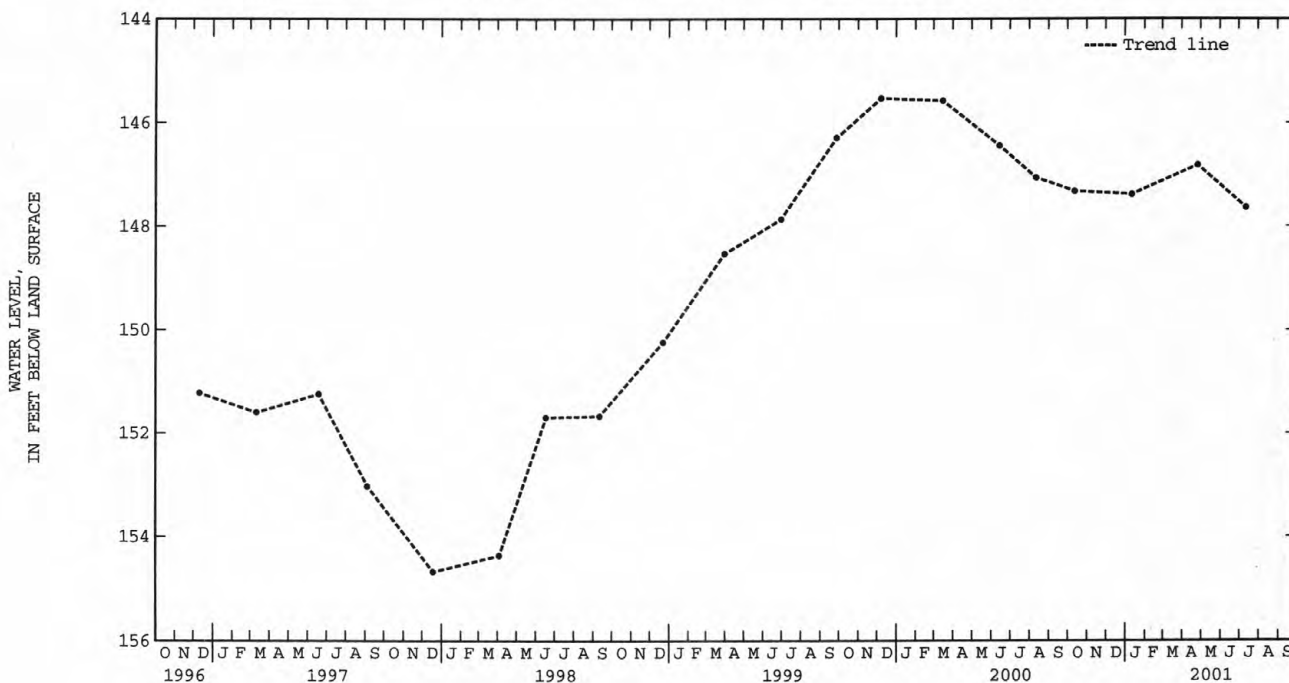
**REMARKS.**--Water level affected by regional drawdown.

**PERIOD OF RECORD.**--August 1970 to December 1975, January 1978 to current year. Unpublished records available prior to October 1985 in files of the Geological Survey.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 113.40 ft below land-surface datum, Aug. 17, 1970; lowest measured, 154.68 ft below land-surface datum, Dec. 18, 1997.

**WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001**

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 12	147.33	JAN 11	147.39	APR 26	146.82	JUL 12	147.64
WATER YEAR 2001		HIGHEST	146.82	APR 26, 2001		LOWEST	147.64 JUL 12, 2001



## GROUND-WATER LEVELS

235

## SOUTHAMPTON COUNTY

363632076580101. Local number, 55A 3 SOW 086.

**LOCATION.**--Lat 36°36'33", long 76°58'00", NAD83, Hydrologic Unit 03010201, 0.1 mi southeast of intersection of State Highways 687 and 689, 4.0 mi southwest of Franklin. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Lower Potomac aquifer of Cretaceous age.

**WELL CHARACTERISTICS.**--Drilled unused water well, diameter 4 in., depth 745 ft, screened 714 to 724 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 16, 1992, to Jul. 19, 1995, bimonthly measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Mar. 2, 1989, to Oct. 15, 1992, occasional measurement with chalked tape by USGS. Prior to Mar. 1, 1989, bimonthly measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel.

**DATUM.**--Elevation of land-surface datum is 18 ft above sea level, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum prior to Jan. 11, 1988; 1.3 ft thereafter.

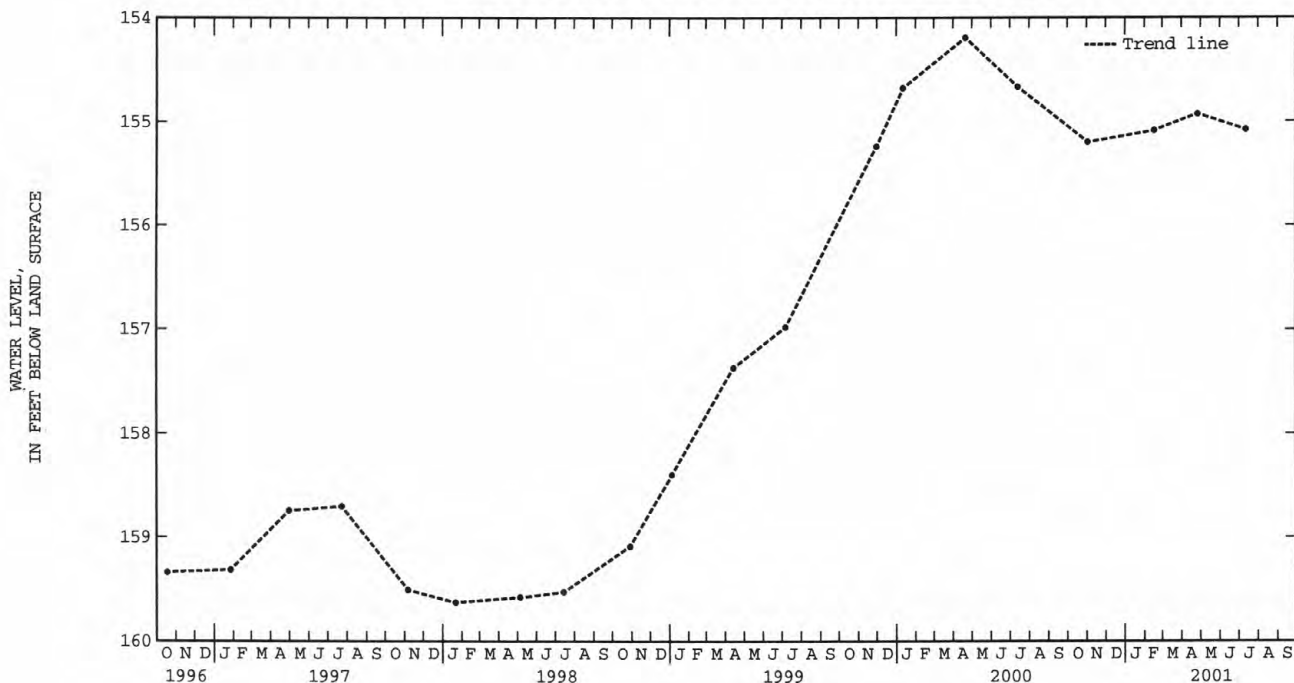
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division prior to Mar. 1, 1989; U.S. Geological Survey Mar. 2, 1989, to Oct. 15, 1992; Virginia Department of Environmental Quality - Water Division thereafter. Water level affected by regional drawdown.

**PERIOD OF RECORD.**--March 1977, October 1978 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 125.00 ft below land-surface datum, Mar. 18, 1977; lowest measured, 159.67 ft below land-surface datum, Oct 11, 1995.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 02	155.20	FEB 16	155.09	APR 26	154.93	JUL 12	155.08
WATER YEAR 2001		HIGHEST	154.93	APR 26, 2001		LOWEST	155.20
							NOV 02, 2000



**GROUND-WATER LEVELS**  
**SOUTHAMPTON COUNTY**

364628076552701. Local number, 55C 3.

**LOCATION.**--Lat 36°46'29", long 76°25'26", NAD83, Hydrologic Unit 03010202, 0.2 mi north of Black Creek, at the intersection of State Highways 638 and 626. Owner: Black Creek Baptist Church.

**AQUIFER.**--Middle Potomac aquifer of Cretaceous age.

**WELL CHARACTERISTIC.**--Drilled unused water well, diameter 4 in., depth 312 ft, screened 300 to 312 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by USGS personnel.

**DATUM.**--Elevation of land-surface is 57 ft above sea level, from topographic map. Measuring Point: Top of coupling in breather pipe, 1.60 ft above land-surface datum prior to May 29, 2001; 1.12 ft thereafter.

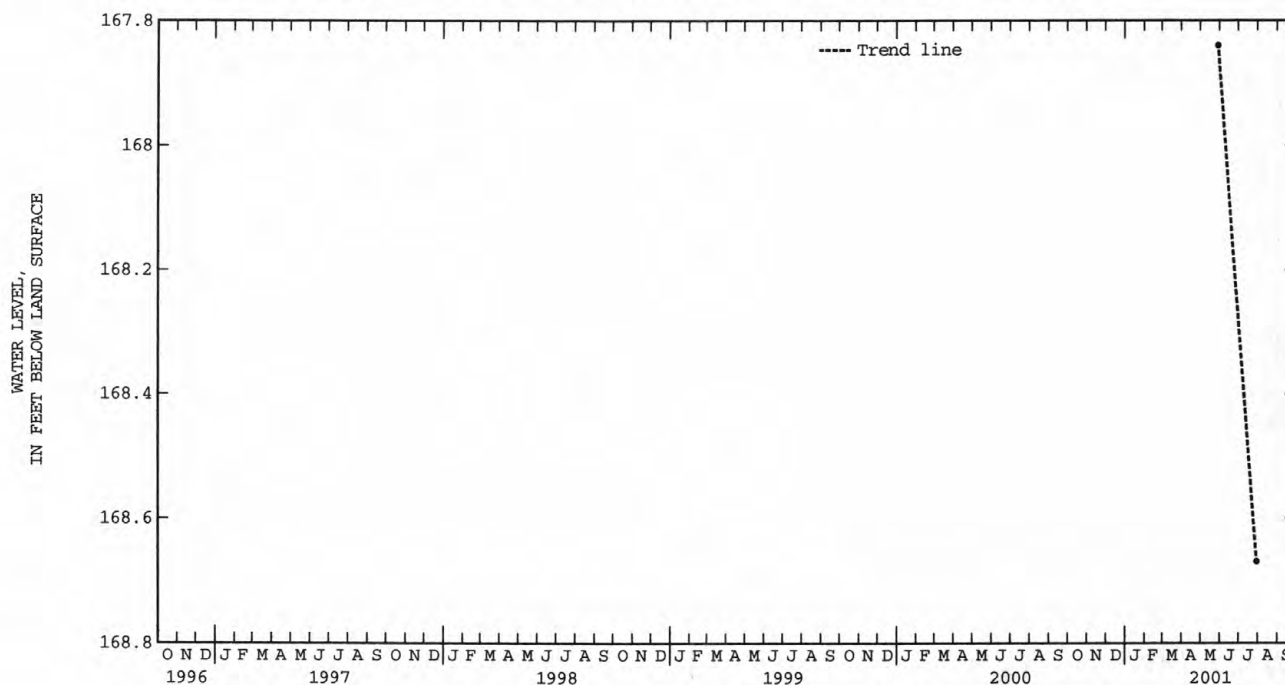
**Remarks.**--Water level affected by regional drawdown. Unpublished records available prior to October 1986 in files of the Geological Survey.

**PERIOD OF RECORD.**--August 1970 to December 1975, January 1978 to March 1990, May 2001 to September 2001.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 132.80 ft below land -surface datum, Dec. 29, 1970; lowest measured, 168.67 ft below land-surface datum, Jul. 30, 2001.

**WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001**

DATE	WATER LEVEL	DATE	WATER LEVEL
MAY 29	167.84	JUL 30	168.67
WATER YEAR 2001      HIGHEST 167.84    MAY 29, 2001      LOWEST 168.67    JUL 30, 2001			





**GROUND-WATER LEVELS**  
**SOUTHAMPTON COUNTY**

237

365120076585101. Local number, 55C 10.

**LOCATION.**--Lat 36°51'21", long 76°58'50", NAD83, Hydrologic Unit 03010202, 100 ft west of State Highway 616, 0.3 mi south of Berlin. Owner: R. L. Harrup.

**AQUIFER.**--Middle Potomac aquifer of Cretaceous age.

**WELL CHARACTERISTICS.**--Drilled withdrawal water well, diameter 4 in., depth 326 ft, screened 316 to 326 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by USGS personnel.

**DATUM.**--Elevation of land-surface datum is 65 ft above sea level, from topographic map. Measuring point: Top of casing, 1.0 ft above land-surface datum.

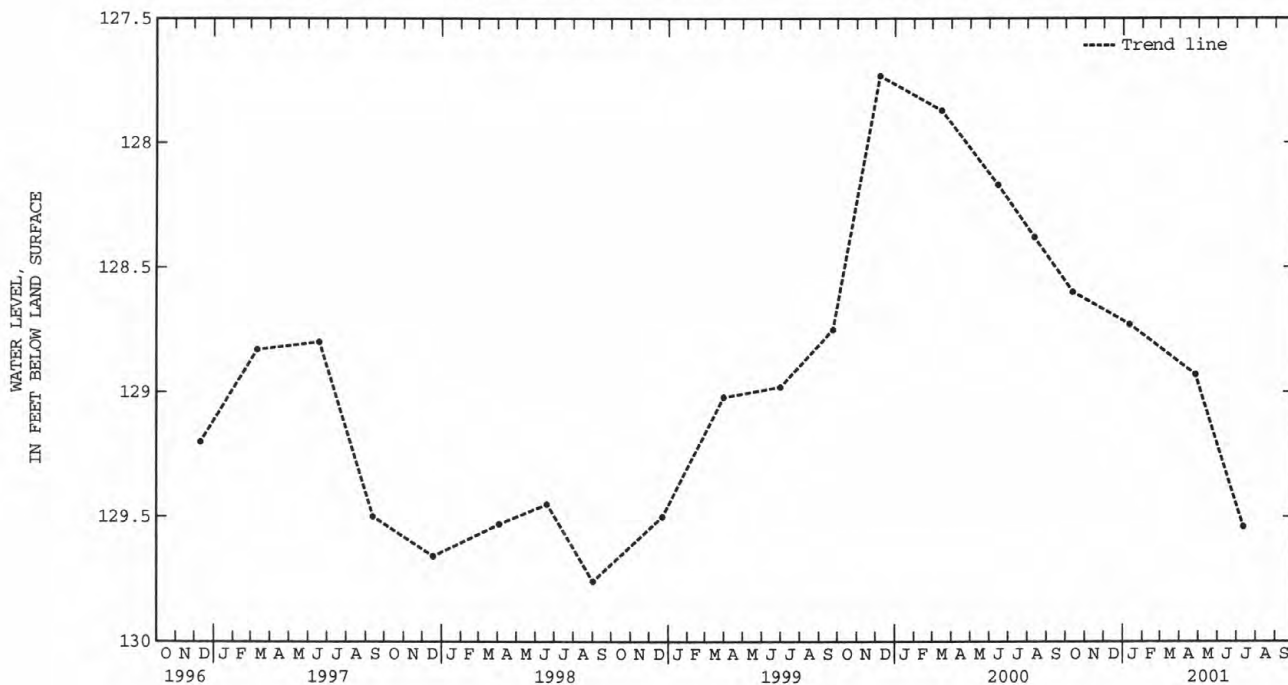
**REMARKS.**--Water level affected by regional drawdown.

**PERIOD OF RECORD.**--August 1970 to December 1975, January 1978 to current year. Unpublished records available prior to October 1985 in files of the Geological Survey.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 94.62 ft below land-surface datum, Aug. 21, 1970; lowest measured, 132.10 ft below land-surface datum, Apr. 2, 1996.

**WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001**

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 12	128.60	JAN 11	128.73	APR 26	128.93	JUL 12	129.54
WATER YEAR 2001		HIGHEST	128.60	OCT 12, 2000	LOWEST	129.54	JUL 12, 2001



## GROUND-WATER LEVELS

## CITY OF SUFFOLK

363345076470201. Local number, 56A 10 SOW 088A.

**LOCATION.**--Lat 36°33'46", long 76°47'01", NAD83, Hydrologic Unit 03010203, 0.1 mi north of intersection of State Highways 668 and 669, 1.9 mi west of Somerton. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Lower Potomac aquifer of Cretaceous age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 1,060 ft, screened 1,050 to 1,060 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 16, 1992, to Jul. 19, 1995, bimonthly measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Mar. 2, 1989, to Oct. 15, 1992, occasional measurement with chalked tape by USGS. Prior to Mar. 1, 1989, bimonthly measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel.

**DATUM.**--Elevation of land-surface datum is 45 ft above sea level, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum prior to Jan. 12, 1988; 1.3 ft thereafter.

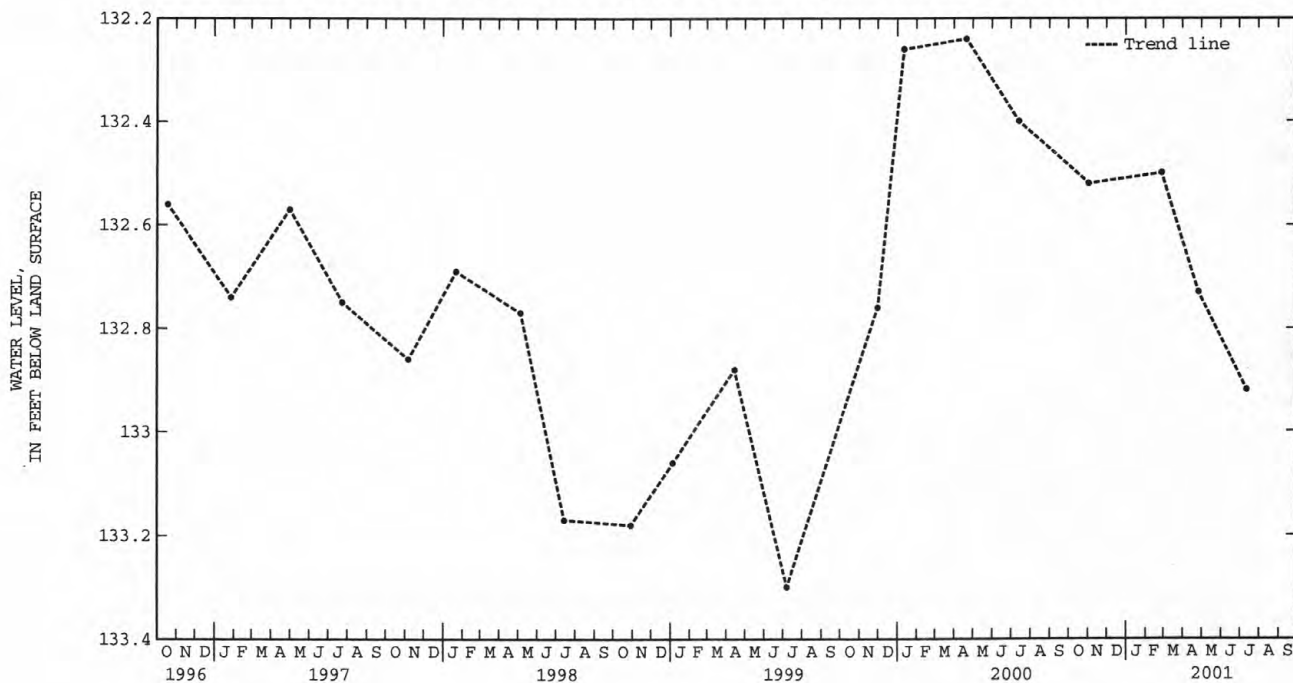
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division prior to Mar. 1, 1989; U.S. Geological Survey Mar. 2, 1989, to Oct. 15, 1992; Virginia Department of Environmental Quality - Water Division thereafter. Water level affected by regional drawdown.

**PERIOD OF RECORD.**--June 1977 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 104.70 ft below land-surface datum, Jun. 30, 1980; lowest measured, 133.30 ft below land-surface datum, Jul. 7, 1999.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 02	132.52	FEB 26	132.50	APR 26	132.73	JUL 12	132.92
WATER YEAR 2001		HIGHEST	132.50	FEB 26, 2001	LOWEST	132.92	JUL 12, 2001



## GROUND-WATER LEVELS

239

## CITY OF SUFFOLK

363653076455401. Local number, 56A 11 SOW 089.

**LOCATION.**--Lat 36°36'54", long 76°45'53", NAD83, Hydrologic Unit 03010203, off State Highway 616, 1.1 mi east of Holy Neck Church, and 3.4 mi north of Somerton. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Middle Potomac aquifer of Cretaceous age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 861 ft, screened 830 to 840 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 16, 1992, to Jul. 19, 1995, bimonthly measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Mar. 2, 1989, to Oct. 15, 1992, occasional measurement with chalked tape by USGS. Prior to Mar. 1, 1989, bimonthly measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel.

**DATUM.**--Elevation of land-surface datum is 79 ft above sea level, from topographic map. Measuring point: Top of casing, 1.0 ft above land-surface datum prior to Nov. 18, 1987; 0.6 ft Nov. 18, 1987, to Jan. 12, 1988; 1.3 ft thereafter.

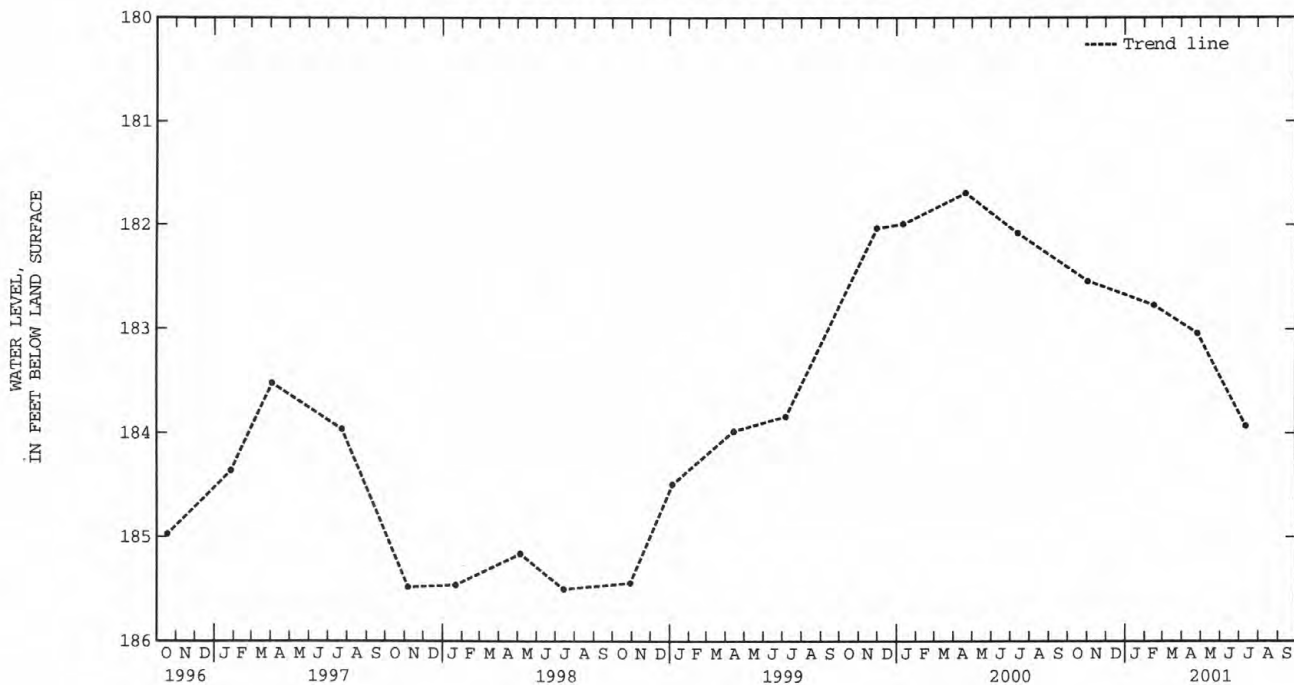
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division prior to Mar. 1, 1989; U.S. Geological Survey Mar. 2, 1989, to Oct. 15, 1992; Virginia Department of Environmental Quality - Water Division thereafter. Water level affected by regional drawdown.

**PERIOD OF RECORD.**--August 1977 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 154.00 ft below land-surface datum, Aug. 9, 1977; lowest measured, 185.50 ft below land-surface datum, Jul. 14, 1998.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 02	182.54	FEB 16	182.77	APR 26	183.04	JUL 12	183.93
WATER YEAR 2001		HIGHEST 182.54		NOV 02, 2000		LOWEST 183.93 JUL 12, 2001	



## GROUND-WATER LEVELS

## CITY OF SUFFOLK

363345076470202. Local number, 56A 12 SOW 088B.

**LOCATION.**--Lat 36°33'46", long 76°47'01", NAD83, Hydrologic Unit 03010203, 0.1 mi north of intersection of State Highways 668 and 669, 1.9 mi west of Somerton. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Middle Potomac aquifer of Cretaceous age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 580 ft, screened 570 to 580 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 8, 1992, to Jul. 19, 1995, bimonthly measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Mar. 2, 1989, to Oct. 7, 1992, occasional measurement with chalked tape by USGS. Prior to Mar. 1, 1989, bimonthly measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel.

**DATUM.**--Elevation of land-surface datum is 45 ft above sea level, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum prior to Jan. 12, 1988; 1.3 ft thereafter.

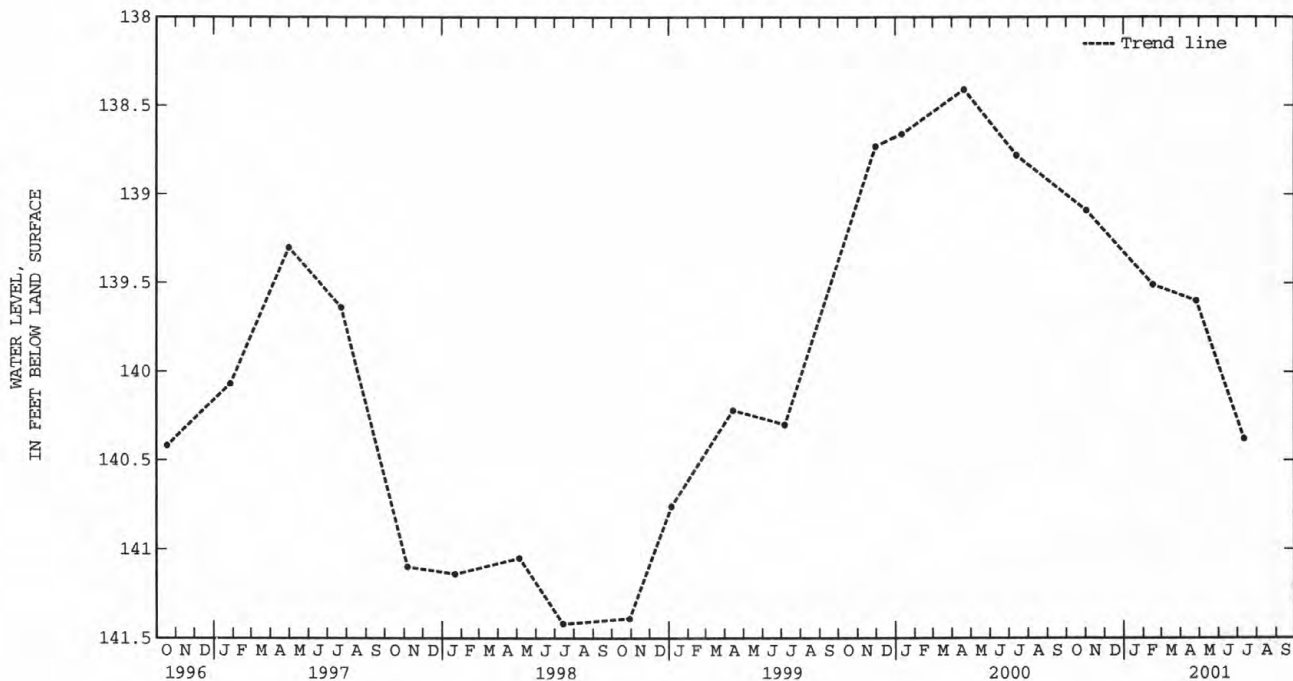
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division prior to Mar. 1, 1989; U.S. Geological Survey Mar. 2, 1989, to Oct. 7, 1992; Virginia Department of Environmental Quality - Water Division thereafter. Water level affected by regional drawdown.

**PERIOD OF RECORD.**--June 1977 to November 1982, June 1985 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 103.00 ft below land-surface datum, Jun. 30, 1977; lowest measured, 141.42 ft below land-surface datum, Jul. 14, 1998.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 02	139.09	FEB 16	139.51	APR 26	139.60	JUL 12	140.38
WATER YEAR 2001		HIGHEST 139.09		NOV 02, 2000		LOWEST 140.38 JUL 12, 2001	



## GROUND-WATER LEVELS

241

## CITY OF SUFFOLK

363625076522602. Local number, 56A 13 SOW 076B.

**LOCATION.**--Lat 36°36'26", long 76°52'25", NAD83, Hydrologic Unit 03010203, 700 ft west of State Highway 615, 0.5 mi southwest of Olive Branch Church, and 8.1 mi south of Holland. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Lower Potomac aquifer of Cretaceous age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 807 ft, screened 797 to 802 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 16, 1992, to Jul. 19, 1995, bimonthly measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Mar. 2, 1989, to Oct. 15, 1992, occasional measurement with chalked tape by USGS. Prior to Mar. 1, 1989, bimonthly measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel.

**DATUM.**--Elevation of land-surface datum is 75 ft above sea level, from topographic map. Measuring point: Top of casing, 1.0 ft above land-surface datum prior to Jan. 12, 1988; 0.8 ft thereafter.

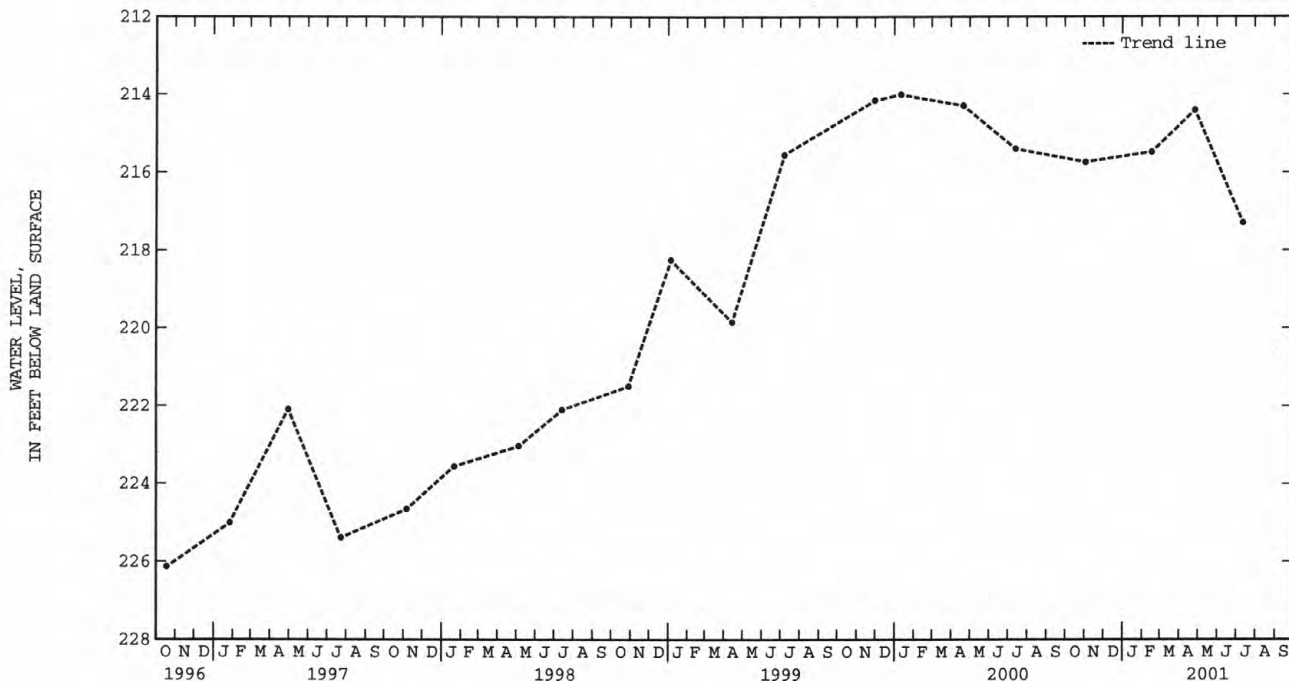
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division prior to Mar. 1, 1989; U.S. Geological Survey Mar. 2, 1989, to Oct. 15, 1992; Virginia Department of Environmental Quality - Water Division thereafter. Water level affected by local pumpage and regional drawdown.

**PERIOD OF RECORD.**--May 1979 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 204.34 ft below land-surface datum, Oct. 26, 1982; lowest measured, 228.29 ft below land-surface datum, May 5, 1995.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 02	215.74	FEB 16	215.48	APR 26	214.40	JUL 12	217.30
WATER YEAR 2001		HIGHEST	214.40	APR 26, 2001		LOWEST	217.30
						JUL 12, 2001	



## GROUND-WATER LEVELS

## CITY OF SUFFOLK

363625076522603. Local number, 56A 14 SOW 076C.

**LOCATION.**--Lat 36°36'26", long 76°52'25", NAD83, Hydrologic Unit 03010203, 700 ft west of State Highway 615, 0.5 mi southwest of Olive Branch Church, and 8.1 mi south of Holland. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Middle Potomac aquifer of Cretaceous age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 735 ft, screened 730 to 735 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 16, 1992, to Jul. 19, 1995, bimonthly measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Mar. 2, 1989, to Oct. 15, 1992, occasional measurement with chalked tape by USGS. Prior to Mar. 1, 1989, bimonthly measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel.

**DATUM.**--Elevation of land-surface datum is 75 ft above sea level, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum prior to Jan. 12, 1988; 1.2 ft thereafter.

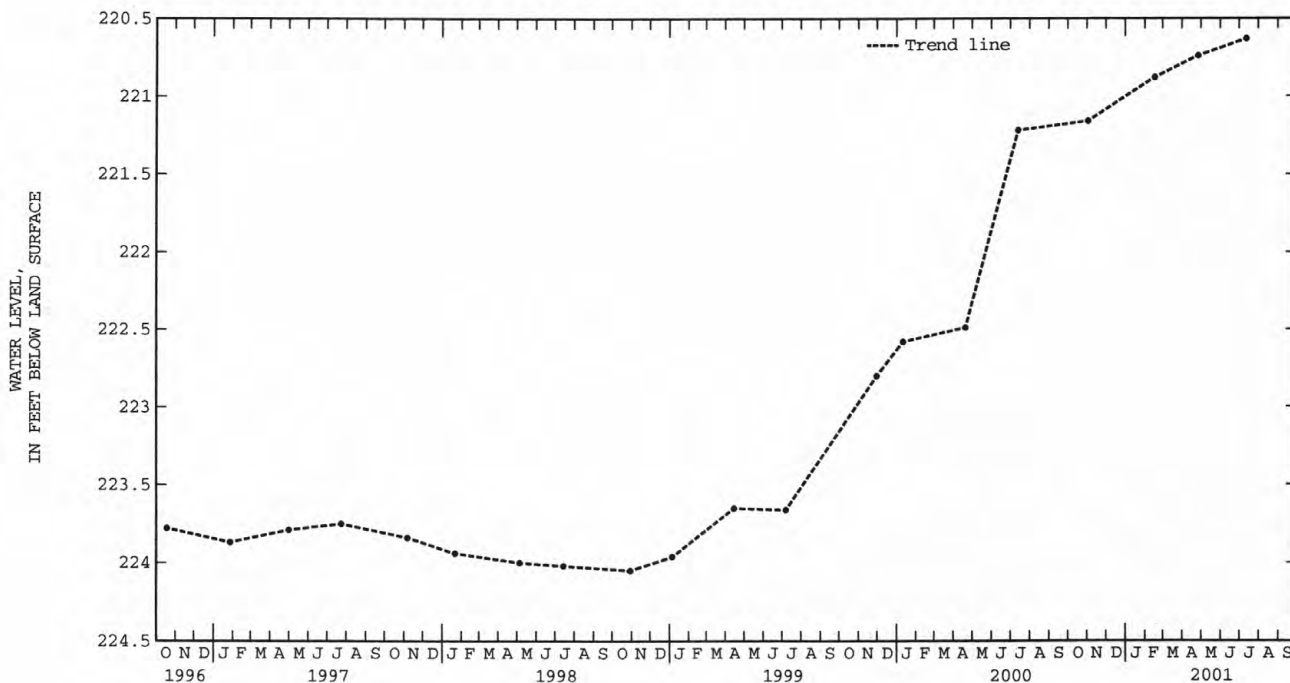
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division prior to Mar. 1, 1989; U.S. Geological Survey Mar. 2, 1989, to Oct. 15, 1992; Virginia Department of Environmental Quality - Water Division thereafter. Water level affected by regional drawdown.

**PERIOD OF RECORD.**--March 1979 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 205.62 ft below land-surface datum, Mar. 7, 1979; lowest measured, 224.05 ft below land-surface datum, Oct. 29, 1998.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 02	221.16	FEB 16	220.88	APR 26	220.74	JUL 12	220.63
WATER YEAR 2001		HIGHEST 220.63		JUL 12, 2001		LOWEST 221.16 NOV 02, 2000	





## GROUND-WATER LEVELS

243

## CITY OF SUFFOLK

363834076382301. Local number, 57B 8.

**LOCATION.**--Lat 36°38'28", long 76°38'04", NAD83, Hydrologic Unit 03010205, 0.3 mi southwest of State Highway 664, 0.8 mi southeast of U.S. Highway 13, and 1.1 mi south of Nurneysville. Owner: Russ Family.

**AQUIFER.**--Yorktown-Eastover aquifer of Miocene-Pliocene age.

**WELL CHARACTERISTICS.**--Drilled flowing water well, diameter 2 in., depth 65 ft, screened 50 to 65 ft.

**INSTRUMENTATION.**--Occasional measurement with manometer by USGS personnel. Dec. 1, 1988, to Jun. 1, 1990, quarterly measurement with a manometer. Prior to Dec. 1, 1988, bimonthly measurement with a manometer.

**DATUM.**--Elevation of land-surface datum is 45 ft above sea level, from topographic map. Measuring point: At land-surface datum.

**REMARKS.**--Capped flowing well; readings are above land-surface datum. Occasional small withdrawals that supply nearby cabin can effect water levels.

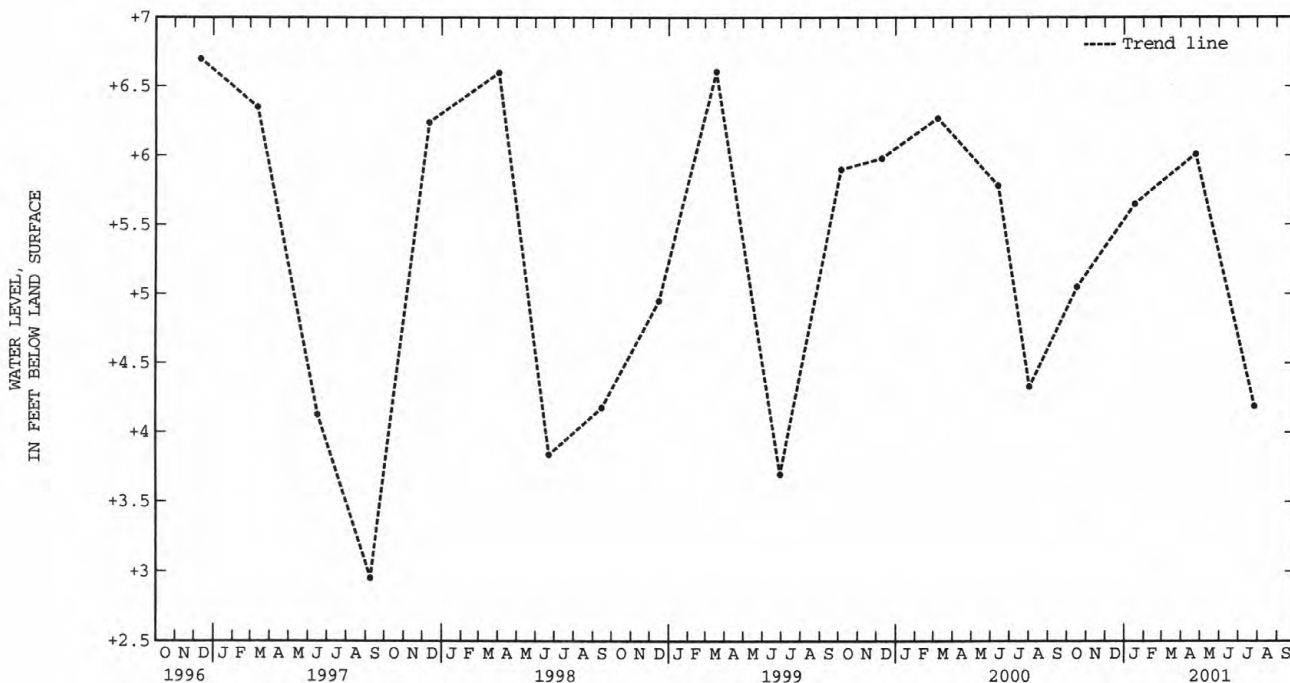
**PERIOD OF RECORD.**--March 1975, November 1977 to current year. Unpublished records available March 1975 in files of the Geological Survey.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 6.70 ft above land-surface datum, Dec. 11, 1996; lowest measured, at land-surface datum, Sep. 26, 1980.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM (READINGS ABOVE LAND-SURFACE INDICATED BY "+"), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

(READINGS ABOVE LAND SURFACE INDICATED BY "+")

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 17	+5.05	JAN 17	+5.65	APR 24	+6.01	JUL 27	+4.19
WATER YEAR 2001		HIGHEST	+6.01	APR 24, 2001		LOWEST	+4.19
							JUL 27, 2001



## GROUND-WATER LEVELS

## CITY OF SUFFOLK

364703076383701. Local number, 57C 21 SOW 099A.

**LOCATION.**--Lat 36°47'04", long 76°38'36", NAD83, Hydrologic Unit 02080208, 700 ft south of U.S. Highway 460, 0.5 mi west of Providence Church, and 1.0 mi west of Kings Fork. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Aquia aquifer of Paleocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 248 ft, screened 238 to 248 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 7, 1985, to Jul. 19, 1995, bimonthly measurement with chalked tape. Prior to Oct. 7, 1985, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 72 ft above sea level, from topographic map. Measuring point: Top of casing, 1.5 ft above land-surface datum prior to Jan. 12, 1988; 1.1 ft thereafter.

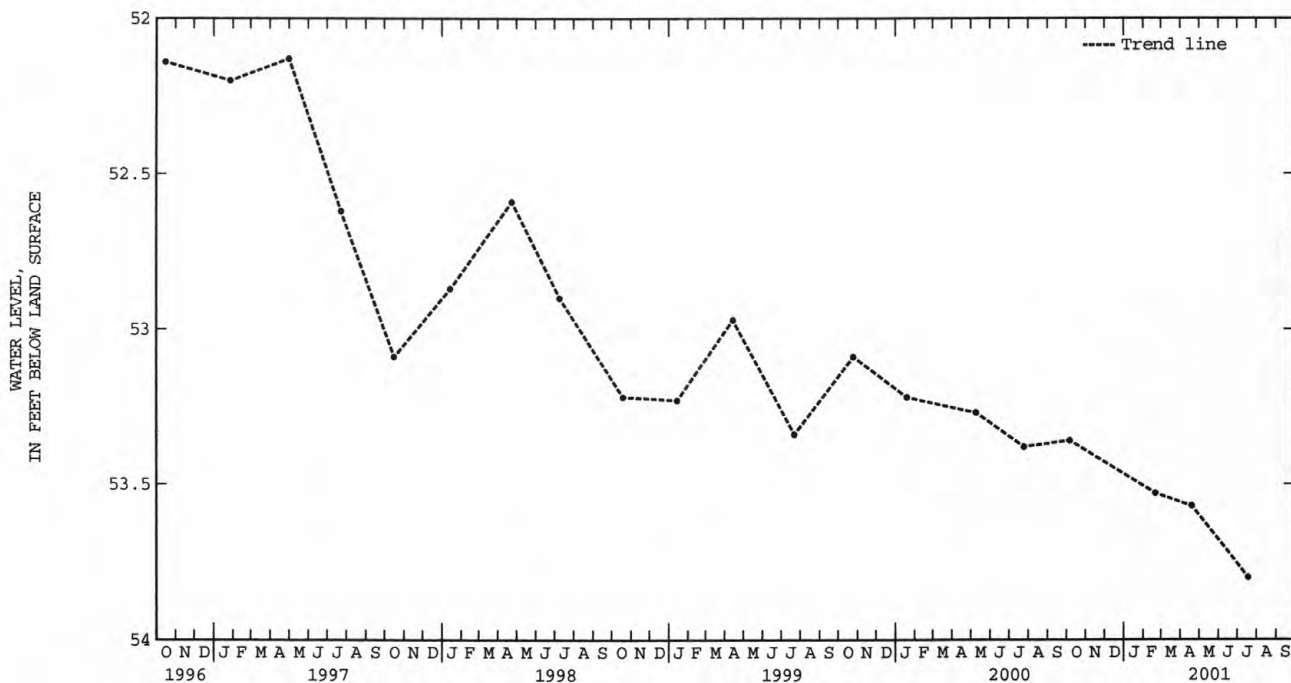
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

**PERIOD OF RECORD.**--September 1983 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 46.32 ft below land-surface datum, Apr. 19, 1984; lowest measured, 53.80 ft below land-surface datum, Jul. 18, 2001.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 06	53.36	FEB 20	53.53	APR 19	53.57	JUL 18	53.80
WATER YEAR 2001		HIGHEST	53.36	OCT 06, 2000	LOWEST	53.80	JUL 18, 2001



## 245

364703076383702. Local number. 57C 22 SOW 099B.

**LOCATION.**--Lat 36°47'04", long 76°38'36", NAD83, Hydrologic Unit 02080208, 700 ft south of U.S. Highway 460, 0.5 mi west of Providence Church, and 1.0 mi west of Kings Fork. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 694 ft., screened 684 to 694 ft.

**INSTRUMENTATION.**--Continuous strip-chart recorder. Prior to Aug. 5, 1981, occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel.

**DATUM.**--Elevation of land-surface datum is 72 ft above sea level, from topographic map. Measuring point: Top of recorder shelf, 2.0 ft above land-surface datum prior to Jul. 14, 1987; 1.7 ft thereafter.

REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage and regional drawdown.

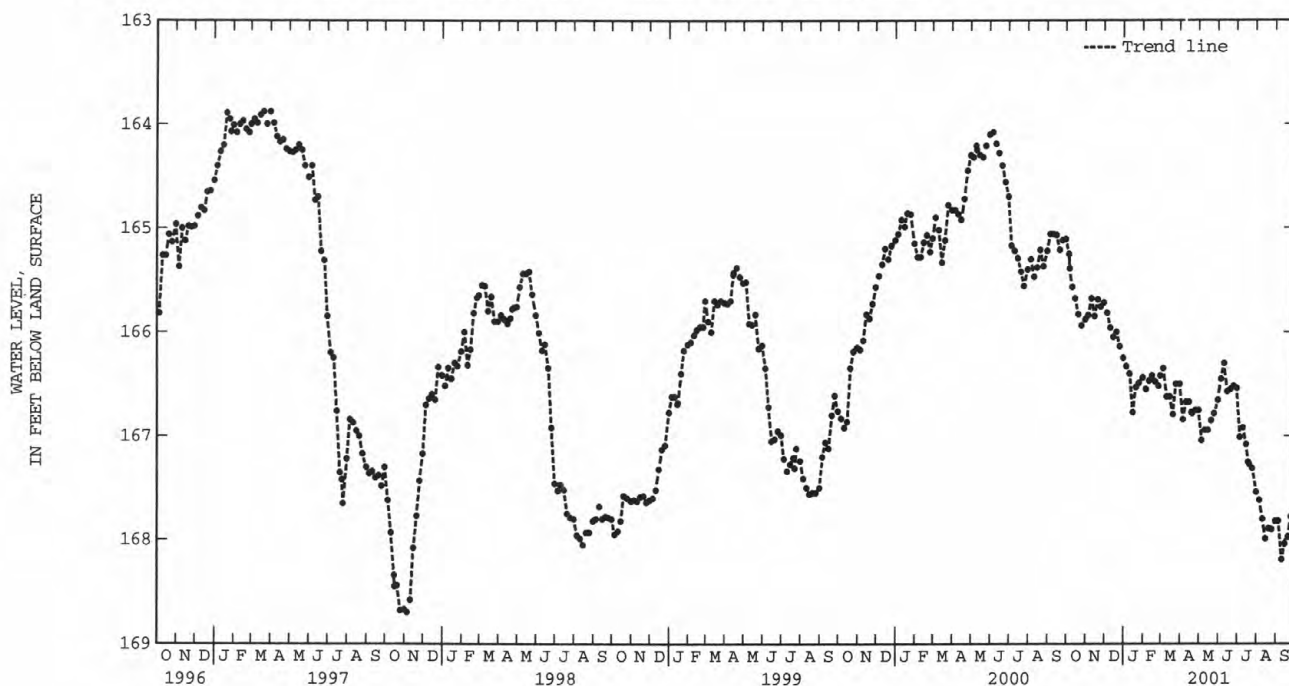
**PERIOD OF RECORD.**--February 1980 to current year. Unpublished records available prior to August 1985 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 128.24 ft below land-surface datum, Feb. 18, 1980; lowest recorded, 188.19 ft below land-surface datum, Dec. 27, 28, 1993.

**EXTREMES FOR CURRENT YEAR.**--Highest instantaneous water level, 165.10 ft below land-surface datum, Oct. 2-5; lowest instantaneous water level, 168.20 ft below land-surface datum, Sept. 11.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	165.25	165.84	165.82	166.33	166.55	166.35	166.84	167.04	166.45	167.01	167.62	167.82
10	165.57	165.68	165.96	166.40	166.47	166.62	166.67	166.94	166.30	166.92	167.80	168.19
15	165.68	165.85	166.05	166.77	166.42	166.62	166.67	166.94	166.57	167.08	167.99	168.04
20	165.83	165.69	166.00	166.53	166.48	166.79	166.78	166.85	166.55	167.27	167.89	167.97
25	165.94	165.76	166.14	166.49	166.52	166.50	166.75	166.78	166.52	167.31	167.90	167.78
BOM	165.88	165.72	166.25	166.44	166.42	166.50	166.75	166.65	166.54	167.54	167.82	167.80

WATER YEAR 2001      HIGHEST   165.25   OCT 05, 2000      LOWEST   168.19   SEP 10, 2001



## GROUND-WATER LEVELS

## CITY OF SUFFOLK

364703076383704. Local number, 57C 24 SOW 099D.

**LOCATION.**--Lat 36°47'04", long 76°38'36", NAD83, Hydrologic Unit 02080208, 700 ft south of U.S. Highway 460, 0.5 mi west of Providence Church, and 1.0 mi west of Kings Fork. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Columbia aquifer of Quaternary age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 25 ft, screened 20 to 25 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 7, 1985, to Jul. 19, 1995, bimonthly measurement with chalked tape. Prior to Oct. 7, 1985, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 72 ft above sea level, from topographic map. Measuring point: Top of casing, 0.5 ft above land-surface datum prior to Mar. 25, 1987; 2.0 ft Mar. 25, 1987, to Jan. 12, 1988; 1.3 ft Jan. 13, 1988, to Jun. 24, 1990; 0.3 ft Jun. 25 to Aug. 15, 1990; 1.8 ft thereafter.

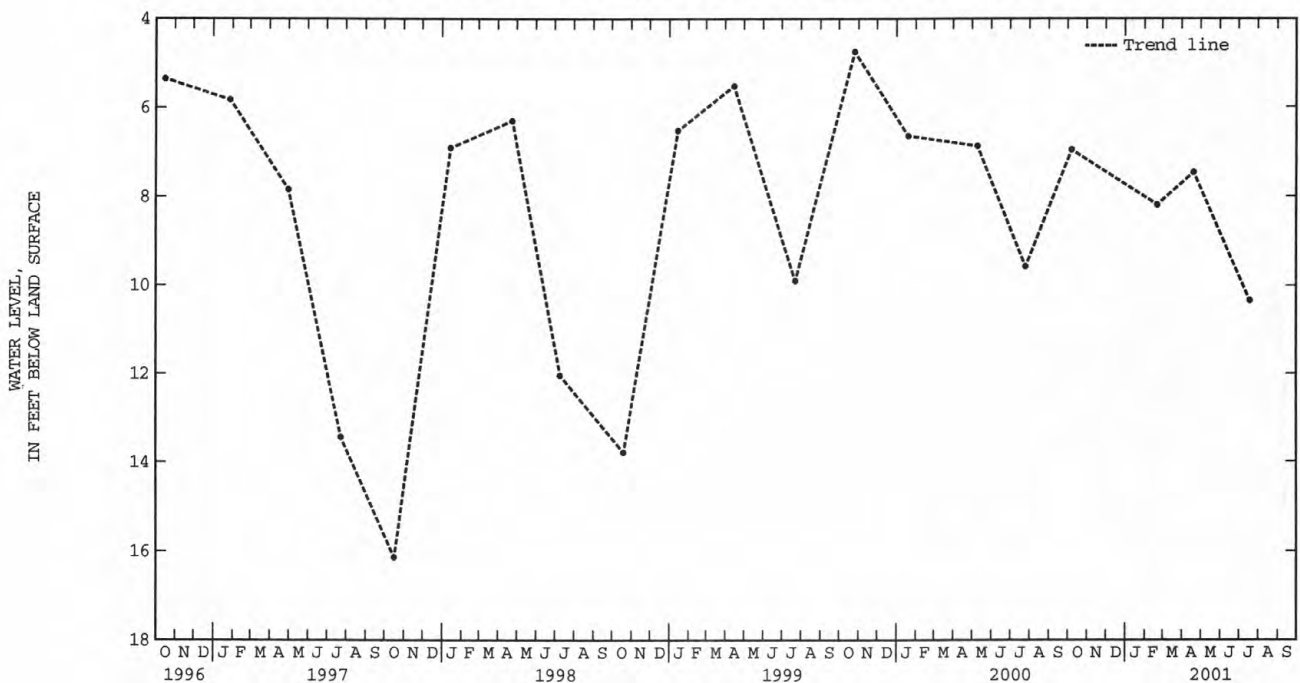
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division.

**PERIOD OF RECORD.**--September 1983 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 2.90 ft below land-surface datum, Mar. 14, 1989; lowest measured, 16.38 ft below land-surface datum, Oct. 15, 1995.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 06	6.96	FEB 20	8.20	APR 19	7.47	JUL 18	10.34
WATER YEAR 2001		HIGHEST	6.96	OCT 06, 2000		LOWEST	10.34 JUL 18, 2001



## GROUND-WATER LEVELS

247

## CITY OF SUFFOLK

363303076330201. Local number, 58A 75 SOW 170.

**LOCATION.**--Lat 36°33'04", long 76°33'01", NAD83, Hydrologic Unit 03010205, 100 ft north of North Carolina State line, 0.4 mi east of Desert Road, and 5.0 mi southeast of Cypress Chapel. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Virginia Beach aquifer of Cretaceous age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 535 ft, screened 525 to 535 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 15, 1992, to Jul. 19, 1995, bimonthly measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Mar. 2, 1989, to Oct. 14, 1992, occasional measurement with chalked tape by USGS. Prior to Mar. 1, 1989, bimonthly measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel.

**DATUM.**--Elevation of land-surface datum is 40 ft above mean sea level, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum.

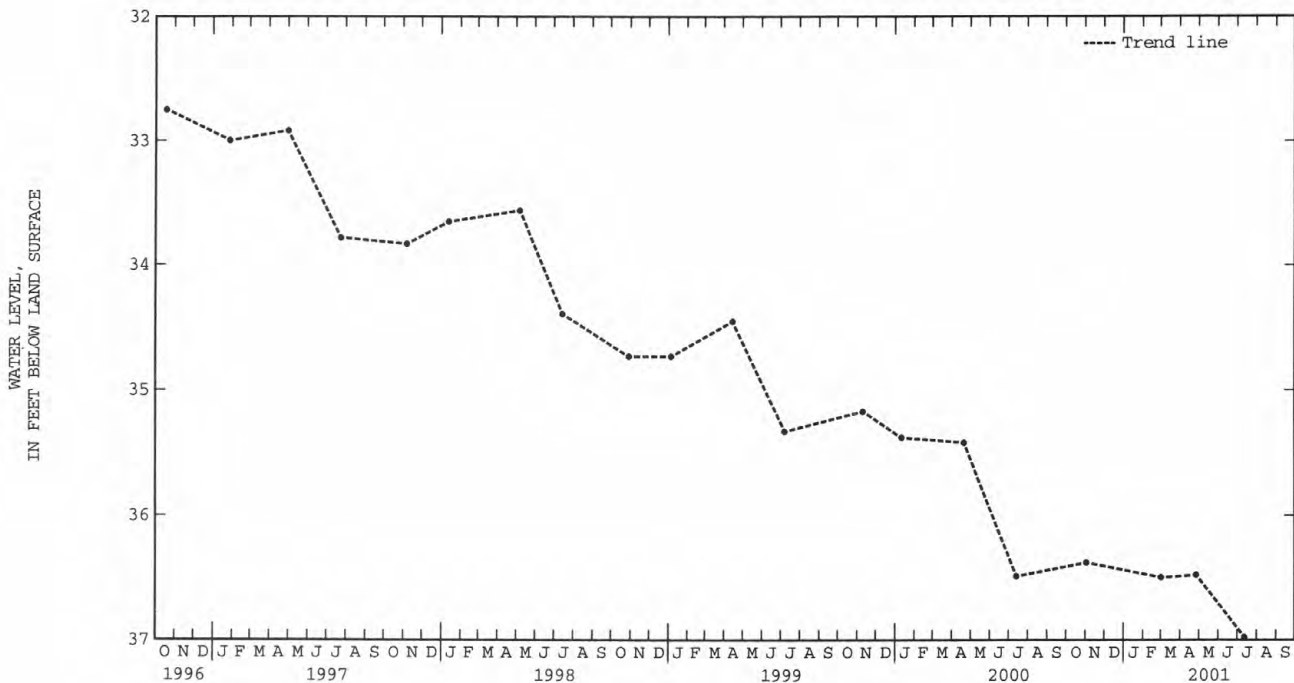
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division prior to Mar. 1, 1989; U.S. Geological Survey Mar. 2, 1989, to Oct. 14, 1992; Virginia Department of Environmental Quality - Water Division thereafter. Water level affected by regional drawdown.

**PERIOD OF RECORD.**--July 1985 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 25.52 ft below land-surface datum, Jul. 11, 1985; lowest measured, 36.98 ft below land-surface datum, Jul. 12, 2001.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL		
NOV 02	36.38	MAR 01	36.50	APR 26	36.48	JUL 12	36.98		
WATER YEAR 2001		HIGHEST		36.38	NOV 02, 2000	LOWEST		36.98	JUL 12, 2001



## GROUND-WATER LEVELS

## CITY OF SUFFOLK

363655076332002. Local number, 58A 77 SOW 180A.

**LOCATION.**--Lat 36°36'56", long 76°33'19", NAD83, Hydrologic Unit 03010205, 0.3 mi north of Great Dismal Swamp Wildlife Refuge Headquarters on Desert Road, 2.0 mi east of Cypress Chapel. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Lower Potomac aquifer of Cretaceous age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in. to 1,158 ft, diameter 3 in. from 1,136 to 1,209 ft, depth 1,209 ft, screened 1,199 to 1,209 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by USGS personnel. Prior to Apr. 15, 1992, digital recorder 60-minute punch.

**DATUM.**--Elevation of land-surface datum is 34.02 ft above sea level. Measuring point: Top of casing, 2.5 ft above land-surface datum prior to April 15, 1992; 1.5 ft thereafter.

**REMARKS.**--Water level affected by regional drawdown. Water from this well is known to contain concentrations of dissolved solids greater than 1,000 mg/L.

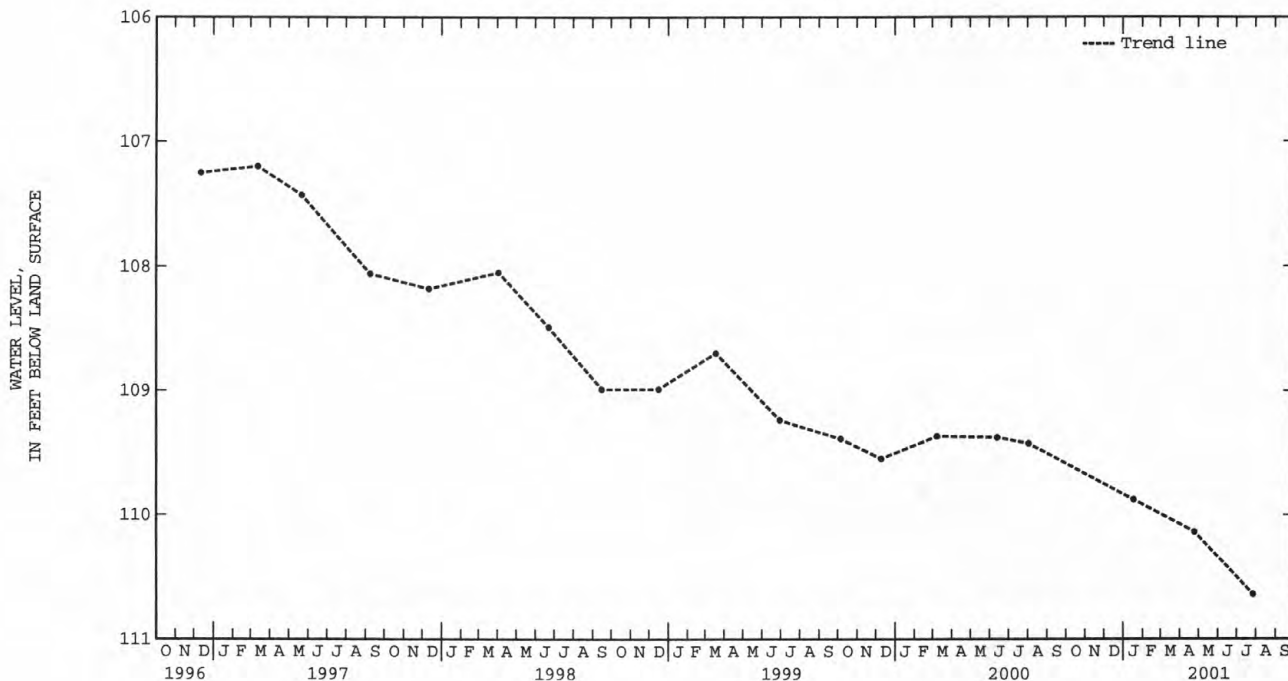
**PERIOD OF RECORD.**--February 1987 to current year.

**REVISED RECORDS.**--WDR VA-89-1: 1987.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level recorded, 96.83 ft below land-surface datum, Sep. 30, 1987; lowest measured, 110.64 ft below land-surface datum, Jul. 27, 2001.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 17	109.88	APR 24	110.14	JUL 27	110.64
WATER YEAR 2001		HIGHEST	109.88	JAN 17, 2001	LOWEST
					110.64
					JUL 27, 2001





## GROUND-WATER LEVELS

249

## CITY OF SUFFOLK

363655076332003. Local number, 58A 78 SOW 180B.

**LOCATION.**--Lat 36°36'56", long 76°33'19", NAD83, Hydrologic Unit 03010205, 0.3 mi north of Great Dismal Swamp Wildlife Refuge Headquarters on Desert Road, 2.0 mi east of Cypress Chapel. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Middle Potomac aquifer of Cretaceous age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in. to 811 ft, diameter 2 in. from 766 to 880 ft, depth 880 ft, screened 850 to 860 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by USGS personnel. Prior to Apr. 15, 1992, digital recorder 60-minute punch.

**DATUM.**--Elevation of land-surface datum is 34.02 ft above sea level. Measuring point: Top of casing, 2.5 ft above land-surface datum prior to April 15, 1992; 1.4 ft thereafter.

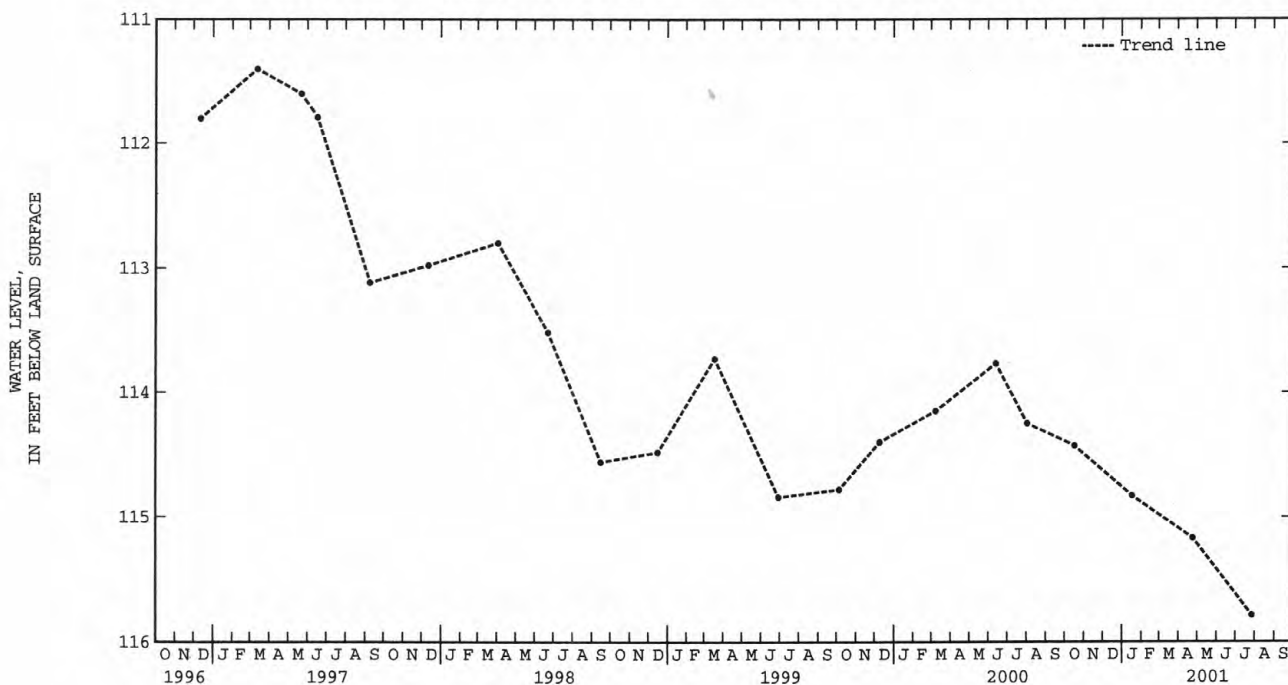
**REMARKS.**--Water level affected by regional drawdown and occasional pumpage for water-quality sampling.

**PERIOD OF RECORD.**--February 1987 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level recorded, 102.14 ft below land-surface datum, Jun. 5, 27, 1987; lowest measured, 115.79 ft below land-surface datum, Jul. 27, 2001.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 17	114.43	JAN 17	114.83	APR 24	115.17	JUL 27	115.79
WATER YEAR 2001		HIGHEST	114.43	OCT 17, 2000	LOWEST	115.79	JUL 27, 2001



## GROUND-WATER LEVELS

## CITY OF SUFFOLK

363655076332004. Local number, 58A 79 SOW 180C.

**LOCATION.**--Lat 36°36'56", long 76°33'19", NAD83, Hydrologic Unit 03010205, 0.3 mi north of Great Dismal Swamp Wildlife Refuge Headquarters on Desert Road, 2.0 mi east of Cypress Chapel. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Brightseat-upper Potomac aquifer of Cretaceous-Paleocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4.5 in. to 670 ft, diameter 2 in. from 657 to 710 ft, depth 710 ft, screened 700 to 710 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by USGS personnel. Prior to Apr. 15, 1992, digital recorder 60-minute punch.

**DATUM.**--Elevation of land-surface datum is 33.97 ft above sea level. Measuring point: Top of casing, 2.4 ft above land-surface datum prior to April 15, 1992; 1.3 ft thereafter.

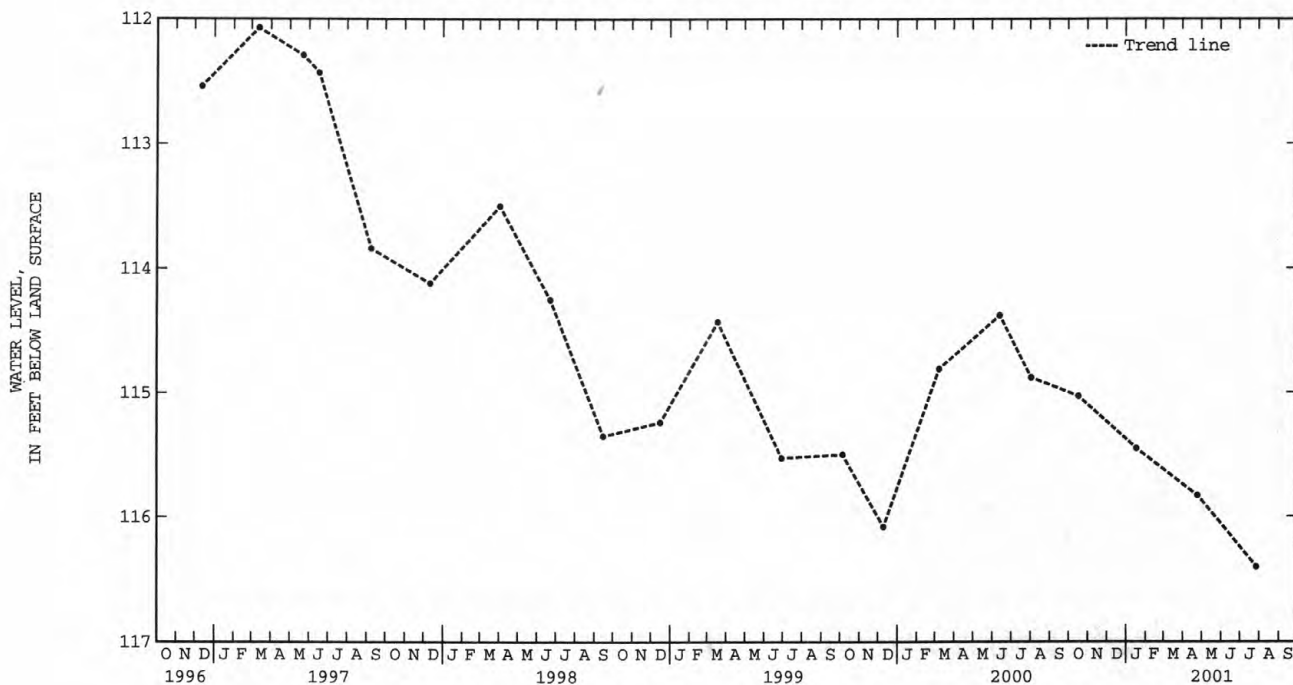
**REMARKS.**--Water level affected by regional drawdown and occasional pumpage from water-quality sampling.

**PERIOD OF RECORD.**--February 1987 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level recorded, 102.72 ft below land-surface datum, May 11, 1987; lowest measured, 116.40 ft below land-surface datum, Jul. 27, 2001.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 17	115.03	JAN 17	115.45	APR 24	115.83	JUL 27	116.40
WATER YEAR 2001		HIGHEST	115.03	OCT 17, 2000	LOWEST	116.40	JUL 27, 2001



## GROUND-WATER LEVELS

251

## CITY OF SUFFOLK

363655076332005. Local number, 58A 80 SOW 180D.

**LOCATION.**--Lat 36°36'56", long 76°33'19", NAD83, Hydrologic Unit 03010205, 0.3 mi north of Great Dismal Swamp Wildlife Refuge Headquarters on Desert Road, 2.0 mi east of Cypress Chapel. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Virginia Beach aquifer of Cretaceous age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4.5 in. to 397 ft, diameter 2 in. from 388 to 440 ft, depth 440 ft, screened 430 to 440 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by USGS personnel. Oct. 29, 1987 to Sep. 30, 1990, digital recorder 60-minute punch. Prior to Oct. 29, 1987, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 34.26 ft above sea level. Measuring point: Top of casing, 2.3 ft above land-surface datum prior to April 15, 1992; 1.9 ft thereafter.

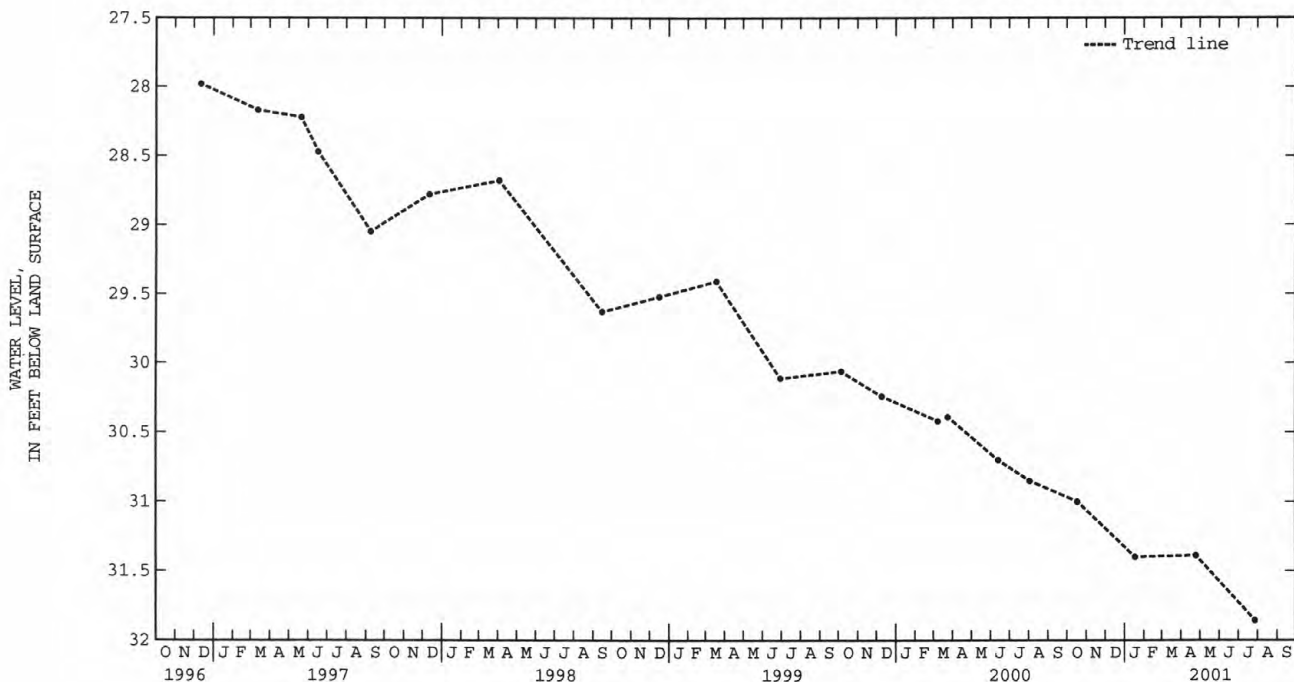
**REMARKS.**--Water level affected by regional drawdown.

**PERIOD OF RECORD.**--June 1987 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 21.55 ft below land-surface datum, Jun. 17, 1987; lowest measured, 31.86 ft below land-surface datum, Jul. 27, 2001.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 17	31.00	JAN 17	31.40	APR 24	31.39	JUL 27	31.86
WATER YEAR 2001		HIGHEST	31.00	OCT 17, 2000	LOWEST	31.86	JUL 27, 2001



## GROUND-WATER LEVELS

## CITY OF SUFFOLK

363655076332006. Local number, 58A 81 SOW 180E.

**LOCATION.**--Lat 36°36'56", long 76°33'19", NAD83, Hydrologic Unit 03010205, 0.3 mi north of Great Dismal Swamp Wildlife Refuge Headquarters on Desert Road, 2.0 mi east of Cypress Chapel. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Chickahominy-Piney Point aquifer of Eocene-Oligocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4.5 in. to 309 ft, diameter 2 in. from 298 to 329 ft, depth 329 ft, screened 319 to 329 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by USGS personnel. Prior to Apr. 15, 1992, digital recorder 60-minute punch.

**DATUM.**--Elevation of land-surface datum is 34.00 ft above sea level. Measuring point: Top of casing, 2.4 ft above land-surface datum prior to April 15, 1992; 1.4 ft thereafter.

**REMARKS.**--Water from this well is known to contain concentrations of dissolved solids greater than 1,000 mg/L. Water level affected by pumpage for water-quality sampling on Mar. 31, 2000. Cause of nonrecovery to pre-pumpage level unknown.

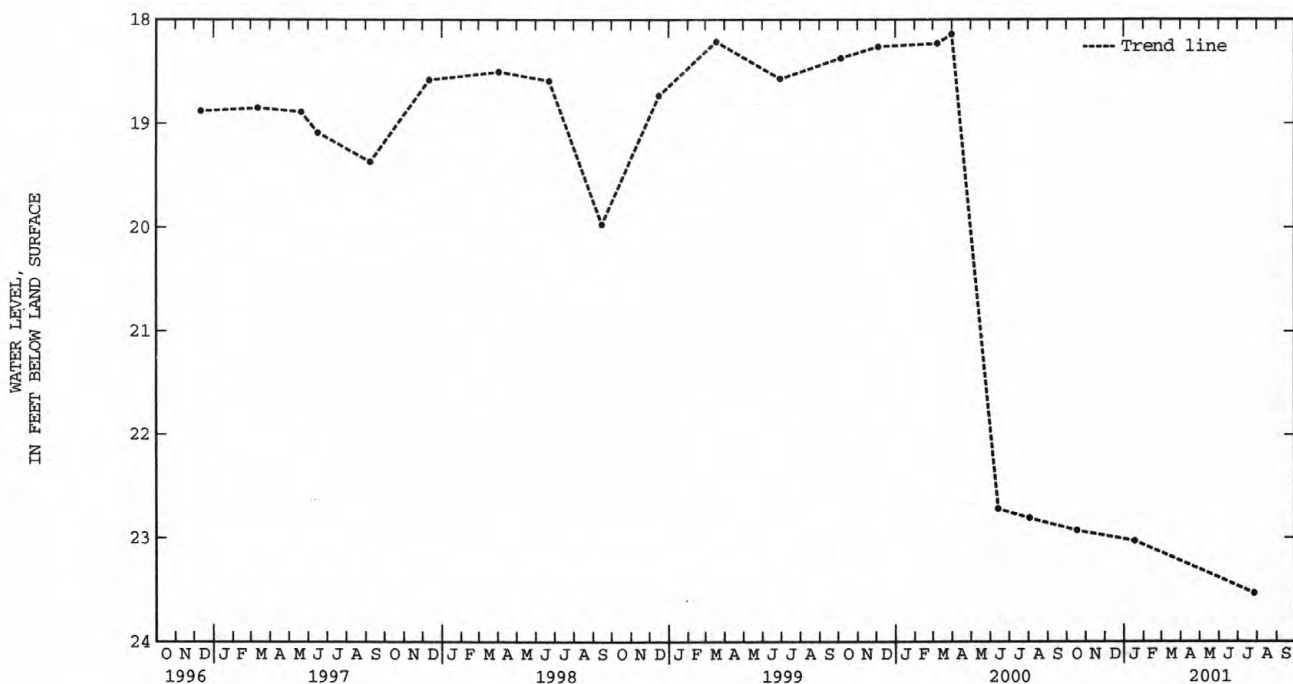
**PERIOD OF RECORD.**--February 1987 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level recorded, 15.07 ft below land-surface datum, Feb. 23, 1987; lowest measured, 23.53 ft below land-surface datum, Jul. 27, 2001.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 17	22.93	JAN 17	23.03	JUL 27	23.53

WATER YEAR 2001	HIGHEST	22.93	OCT 17, 2000	LOWEST	23.53	JUL 27, 2001
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## GROUND-WATER LEVELS

253

## CITY OF SUFFOLK

363655076332008. Local number, 58A 83 SOW 180G.

**LOCATION.**--Lat 36°36'56", long 76°33'19", NAD83, Hydrologic Unit 03010205, 0.3 mi north of Great Dismal Swamp Wildlife Refuge Headquarters on Desert Road, 2.0 mi east of Cypress Chapel. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Yorktown-Eastover aquifer of Miocene-Pliocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4.5 in. to 145 ft, diameter 2 in. from 135 to 165 ft, depth 165 ft, screened 155 to 165 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by USGS personnel. Prior to Feb. 15, 1996, digital recorder 60-minute punch.

**DATUM.**--Elevation of land-surface datum is 33.84 ft above sea level. Measuring point: Top of casing, 2.5 ft above land-surface datum.

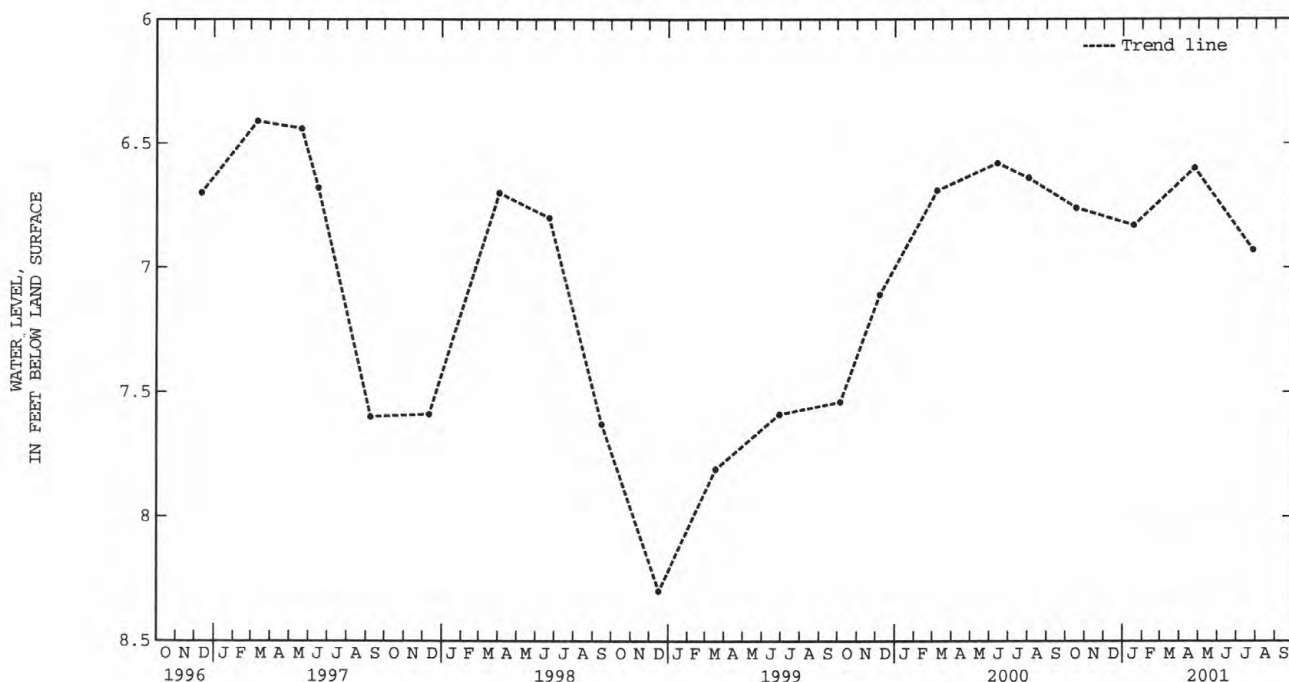
**REMARKS.**--Water from this well is known to contain concentrations of dissolved solids greater than 1,000 mg/L.

**PERIOD OF RECORD.**--February 1987 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level recorded, 6.09 ft below land-surface datum, May 29, 1990; lowest recorded, 9.20 ft below land-surface datum, Dec. 29, 1995.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 17	6.76	JAN 17	6.83	APR 24	6.60	JUL 27	6.93
WATER YEAR 2001		HIGHEST	6.60	APR 24, 2001		LOWEST	6.93 JUL 27, 2001



## GROUND-WATER LEVELS

## CITY OF SUFFOLK

363655076332009. Local number, 58A 84 SOW 180H.

**LOCATION.**--Lat 36°36'56", long 76°33'19", NAD83, Hydrologic Unit 03010205, 0.3 mi north of Great Dismal Swamp Wildlife Refuge Headquarters on Desert Road, 2.0 mi east of Cypress Chapel. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Columbia aquifer of Quaternary age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4.5 in., depth 20 ft, screened 10 to 20 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by USGS personnel. Prior to Feb. 15, 1996, digital recorder 60-minute punch.

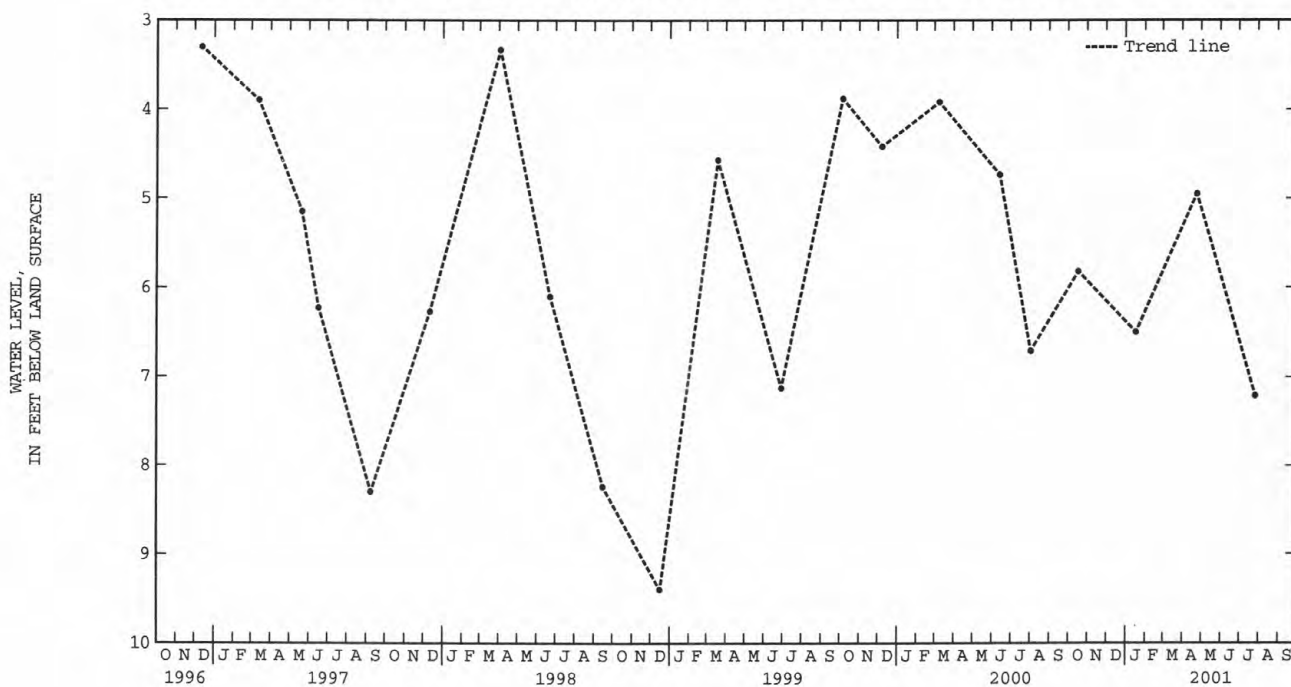
**DATUM.**--Elevation of land-surface datum is 33.87 ft above sea level. Measuring point: Top of casing, 2.5 ft above land-surface datum.

**PERIOD OF RECORD.**--February 1987 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level recorded, 1.47 ft below land-surface datum, Mar. 24, 1989; lowest recorded, 10.16 ft below land-surface datum, Nov. 7-10, 1995.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 17	5.82	JAN 17	6.50	APR 24	4.95	JUL 27	7.21
WATER YEAR 2001		HIGHEST	4.95	APR 24, 2001		LOWEST	7.21 JUL 27, 2001





## GROUND-WATER LEVELS

255

## CITY OF SUFFOLK

363928076332901. Local number, 58B 13.

**LOCATION.**--Lat 36°39'29", long 76°33'28", NAD83, Hydrologic Unit 03010205, 700 ft east of State Highway 642, 4.0 mi south of Suffolk. Owner: Melvin Brinkley.

**AQUIFER.**--Columbia aquifer of Quaternary age.

**WELL CHARACTERISTICS.**--Dug unused water well, diameter 22 in., depth 15 ft.

**INSTRUMENTATION.**--Electronic data logger 60 minute record interval. Mar. 2, 1994 to May 28, 1999, digital recorder 60-minute punch. Sep. 20, 1993 to Mar. 2, 1994, occasional measurement with chalked tape by USGS personnel. Jan. 24, 1981, to Sep. 20, 1993, digital recorder 60-minute punch. Prior to Jan. 24, 1981, continuous strip-chart recorder.

**DATUM.**--Elevation of land-surface datum is 40 ft above sea level, from topographic map. Measuring point: Top of recorder shelf, 1.9 ft above land-surface datum.

**REMARKS.**--Missing record due to recorder malfunction.

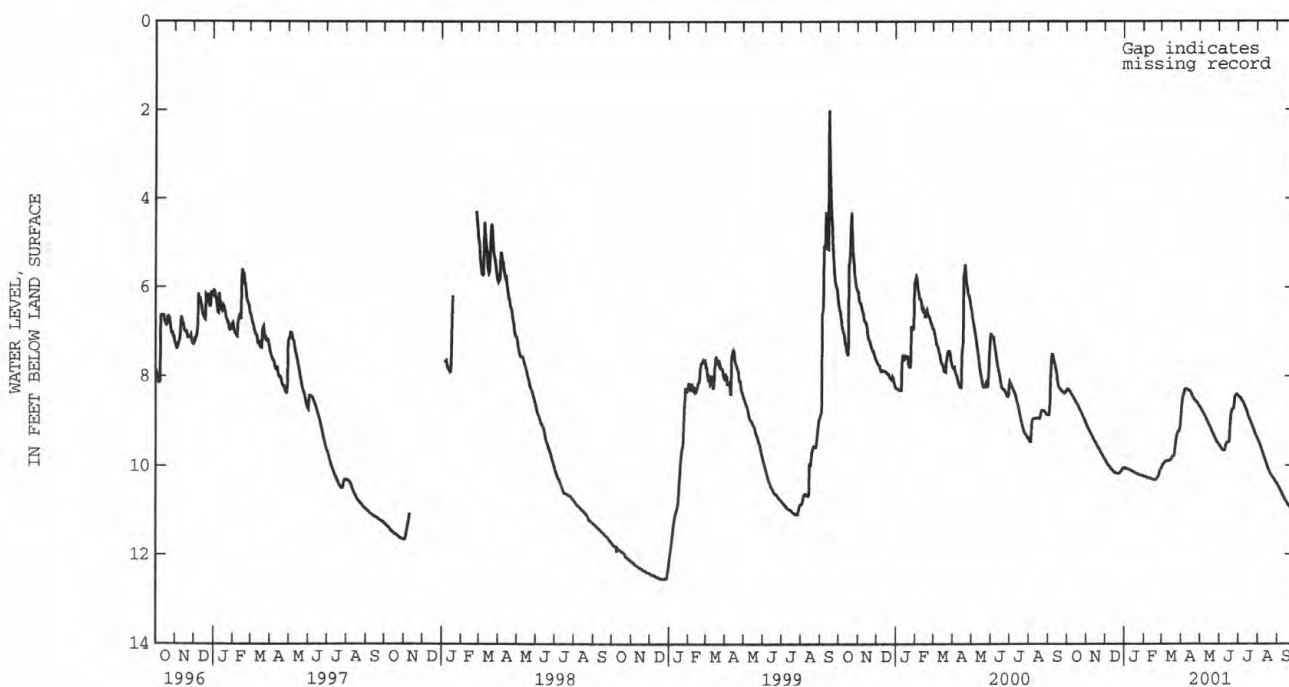
**PERIOD OF RECORD.**--March 1975 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level recorded, 0.59 ft below land-surface datum, Sep. 16, 1999; lowest recorded, 13.44 ft below land-surface datum, Jan. 23-26, 1981.

**EXTREMES FOR CURRENT YEAR.**--Highest instantaneous water level, 8.26 ft below land-surface datum, Apr. 9-10; lowest instantaneous water level, 11.08 ft below land-surface datum, Sep. 30.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.31	9.19	9.97	10.07	10.25	9.95	8.41	8.78	9.63	8.48	9.54	10.51
10	8.43	9.32	10.06	10.10	10.28	9.89	8.28	8.91	9.63	8.61	9.75	10.66
15	8.56	9.46	10.14	10.13	10.31	9.87	8.32	9.07	9.47	8.78	9.96	10.80
20	8.69	9.59	10.17	10.17	10.31	9.79	8.46	9.22	8.81	8.98	10.14	10.90
25	8.83	9.72	10.14	10.20	10.19	9.33	8.56	9.38	8.55	9.16	10.26	11.00
EOM	9.03	9.84	10.05	10.23	10.07	9.07	8.66	9.52	8.42	9.37	10.39	11.08



## GROUND-WATER LEVELS

## CITY OF SUFFOLK

364318076365501. Local number, 58B268 SOW 169A.

**LOCATION.**--Lat 36°43'19", long 76°36'54", NAD83, Hydrologic Unit 02080208, 500 ft north of Norfolk and Western Railroad near Lake Kilby, 0.5 mi west of Suffolk. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Columbia aquifer of Quarternary age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 20 ft, screened 12 to 20 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to Jul. 19, 1995, bimonthly measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 35 ft above sea level, from topographic map. Measuring point: Top of casing, 2.5 ft above land-surface datum.

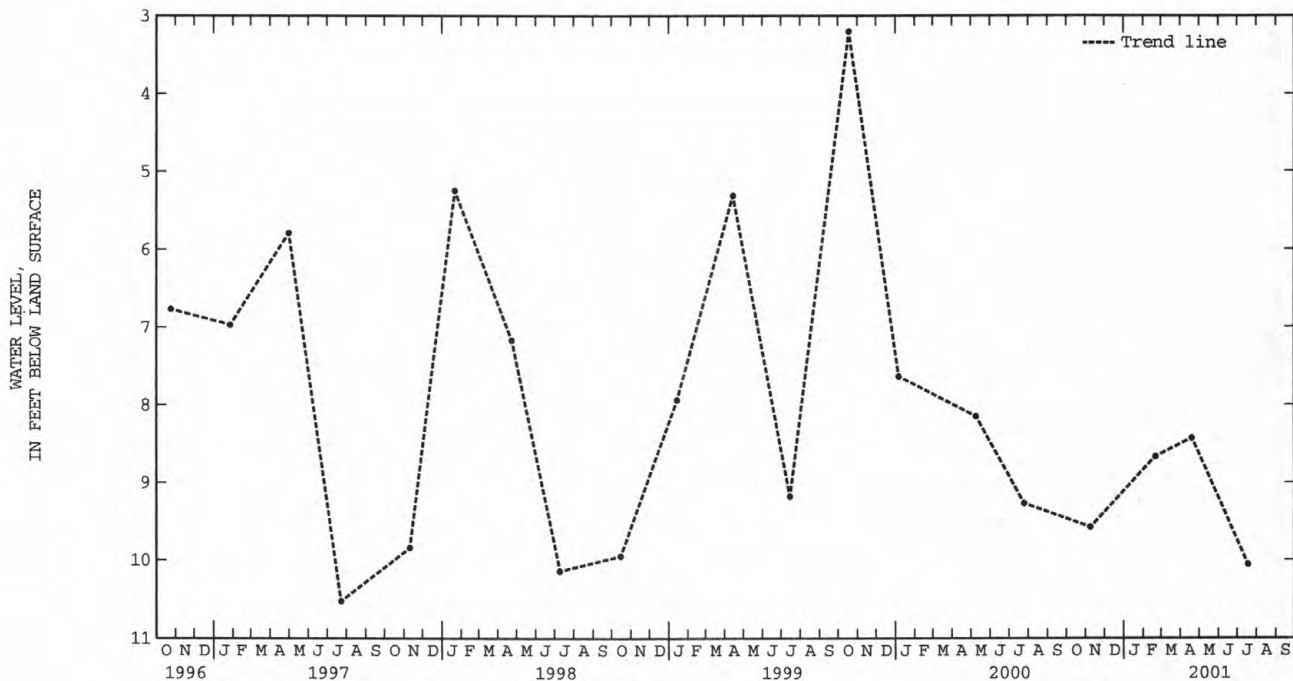
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division.

**PERIOD OF RECORD.**--February 1987 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 3.20 ft below land-surface datum, Oct. 18, 1999; lowest measured, 11.86 ft below land-surface datum, Oct. 11, 1995.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 08	9.58	FEB 20	8.67	APR 19	8.43	JUL 18	10.06
WATER YEAR 2001		HIGHEST	8.43	APR 19, 2001		LOWEST	10.06
							JUL 18, 2001



## GROUND-WATER LEVELS

257

## CITY OF SUFFOLK

364318076365502. Local number, 58B269 SOW 169B.

**LOCATION.**--Lat 36°43'19", long 76°36'54", NAD83, Hydrologic Unit 02080202, 500 ft north of Norfolk and Western Railroad near Lake Kilby, 0.5 mi west of Suffolk. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Aquia aquifer of Paleocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 360 ft, screened 350 to 360 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to Jul. 19, 1995, bimonthly measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 35 ft above sea level, from topographic map. Measuring point: Top of casing, 1.4 ft above land-surface datum.

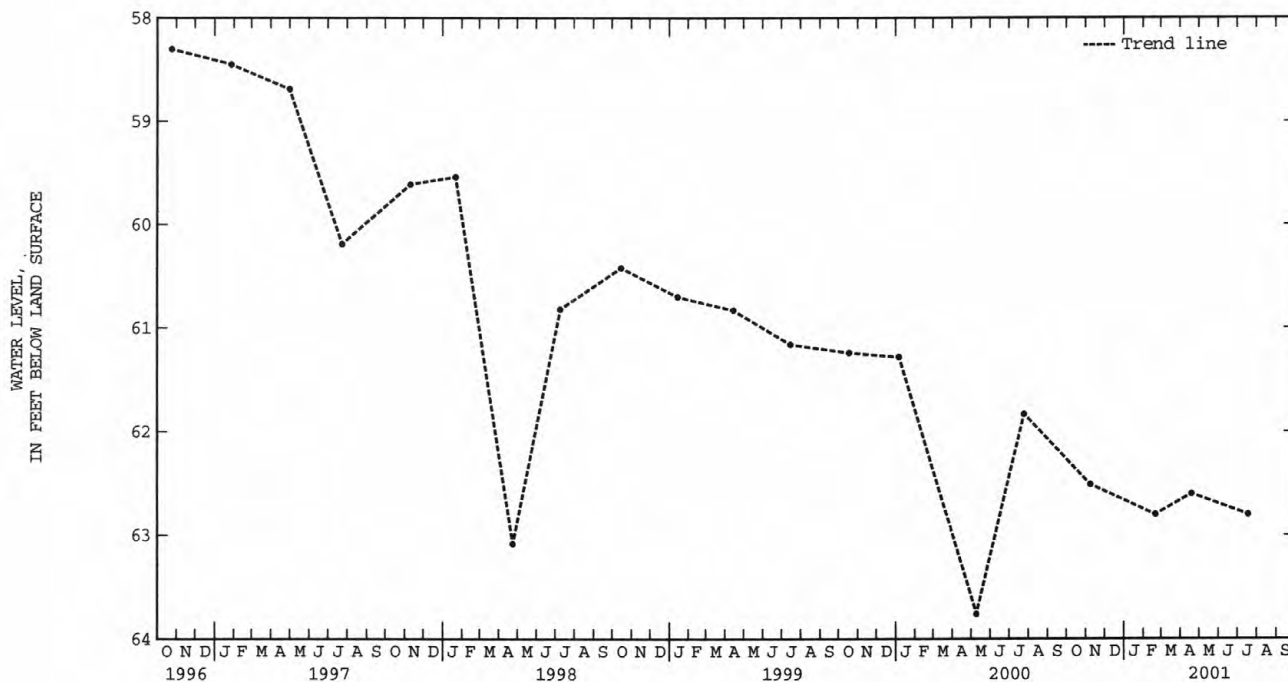
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

**PERIOD OF RECORD.**--July 1985 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 43.06 ft below land-surface datum, Jul. 8, 1985; lowest measured, 63.76 ft below land-surface datum, May 9, 2000.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 08	62.51	FEB 20	62.80	APR 19	62.60	JUL 18	62.80
WATER YEAR 2001		HIGHEST	62.51	NOV 08, 2000	LOWEST	62.80	FEB 20, 2001
							JUL 18, 2001



## CITY OF SUFFOLK

**LOCATION.**--Lat 36°43'19", long 76°36'54", NAD83, Hydrologic Unit 02080208, 500 ft north of Norfolk and Western Railroad near Lake Kilby, 0.5 mi west of Suffolk. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Brightseat-upper Potomac aquifer of Cretaceous-Paleocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 500 ft, screened 490 to 500 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to Jul. 19, 1995, bimonthly measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 35 ft above sea level, from topographic map. Measuring point: Top of casing, 1.4 ft above land-surface datum.

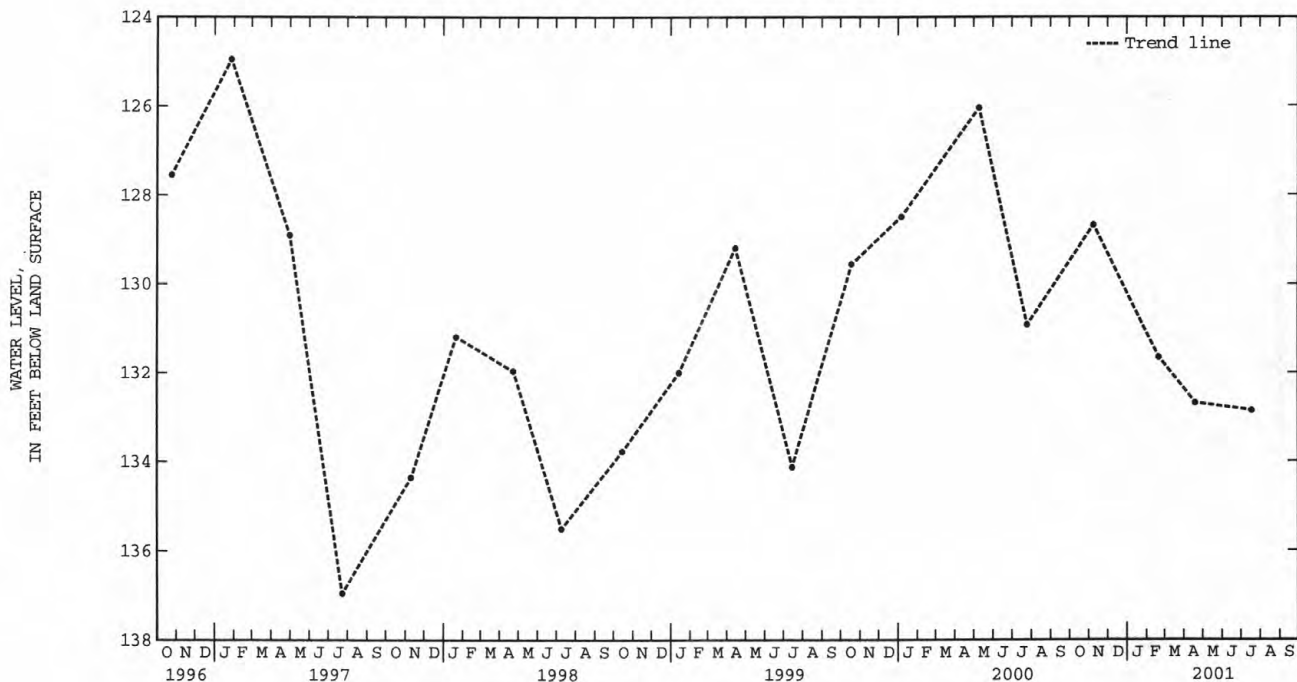
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level may be affected by local pumpage and regional drawdown.

**PERIOD OF RECORD.**--July 1985 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 112.59 ft below land-surface datum, Feb. 25, 1986; lowest measured, 159.00 ft below land-surface datum, Jul. 9, 1991.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 08	128.68	FEB 20	131.65	APR 19	132.68	JUL 18	132.85
WATER YEAR 2001		HIGHEST	128.68	NOV 08, 2000		LOWEST	132.85 JUL 18, 2001



## GROUND-WATER LEVELS

259

## CITY OF SUFFOLK

364348076363201. Local number, 58B273 SOW 169F.

**LOCATION.**--Lat 36°43'49", long 76°36'31", NAD83, Hydrologic Unit 02080208, 100 ft south of U.S. Highway 58 near Lake Kilby, 0.2 mi west of Suffolk. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Middle Potomac aquifer of Cretaceous age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 661 ft, screened 541 to 546 ft, 567 to 572 ft, 635 to 640 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 2, 1992, to Jul. 19, 1995, bimonthly measurement with chalked tape. Nov. 5, 1986, to Oct. 1, 1992, continuous strip-chart recorder. Prior to Nov. 5, 1986, bimonthly measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 26 ft above sea level, from topographic map. Measuring point: Top of casing, 1.2 ft above land-surface datum.

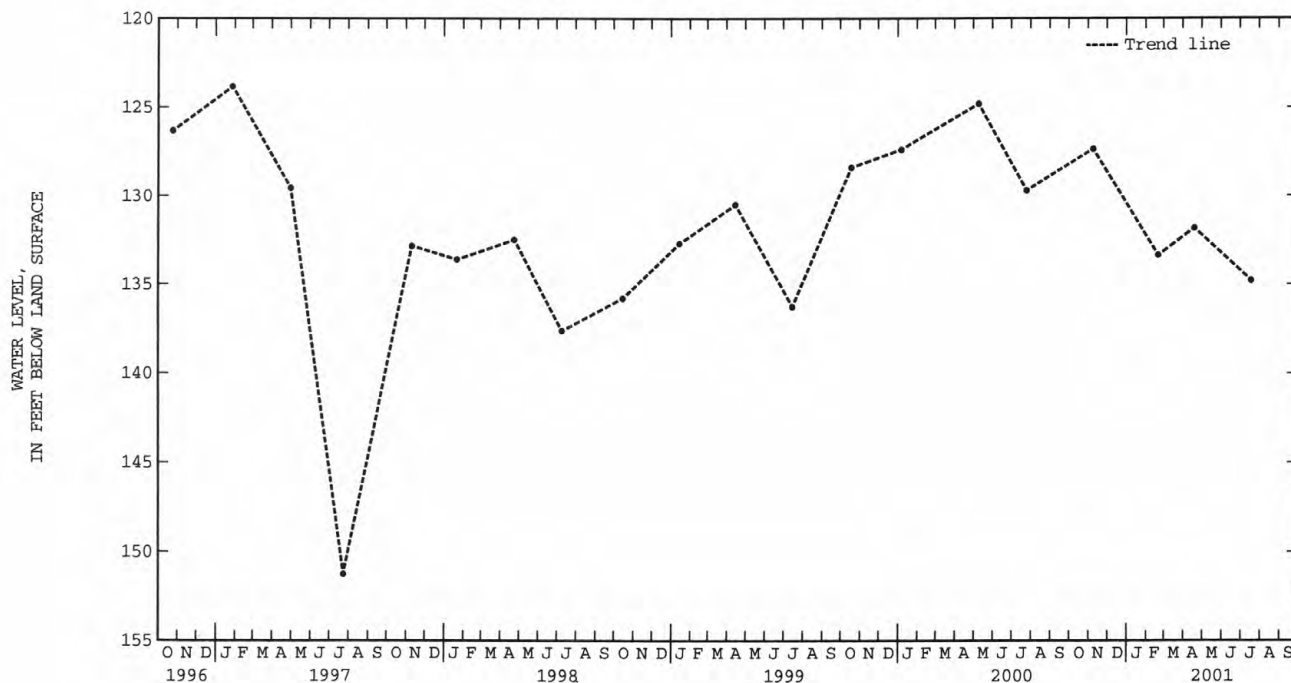
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage and regional drawdown.

**PERIOD OF RECORD.**--July 1985 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level recorded, 111.00 ft below land-surface datum, Jul. 18, 1991; lowest recorded, 162.99 ft below land-surface datum, Oct. 15, 1993.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 08	127.35	FEB 20	133.36	APR 19	131.83	JUL 18	134.78
WATER YEAR 2001		HIGHEST 127.35		NOV 08, 2000		LOWEST 134.78 JUL 18, 2001	



## GROUND-WATER LEVELS

## CITY OF SUFFOLK

365133076351201. Local number, 58C 57 SOW 141A.

**LOCATION.**--Lat 36°51'34", long 76°35'11", NAD83, Hydrologic Unit 02080208, 500 ft west of old Chuckatuck High School in Chuckatuck. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Yorktown-Eastover aquifer of Miocene-Pliocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 122 ft, screened 112 to 122 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 8, 1985, to Jul. 19, 1995, bimonthly measurement with chalked tape. Prior to Oct. 8, 1985, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 52 ft above sea level, from topographic map. Measuring point: Top of casing, 0.5 ft above land-surface datum prior to Jan. 12, 1988; 1.0 ft Jan. 12, 1988, to Nov. 12, 1991; 2.4 ft Nov. 13, 1991 to Jul. 9, 1998; 1.80 ft thereafter.

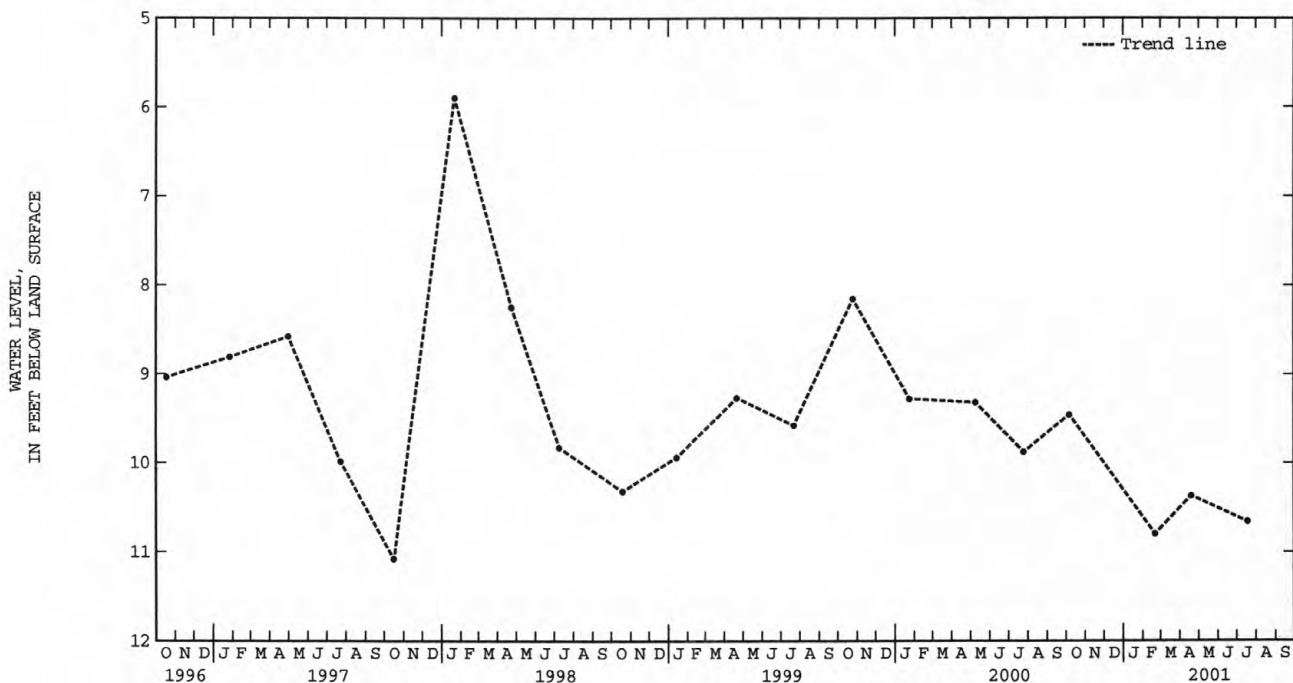
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division.

**PERIOD OF RECORD.**--February 1980 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 5.90 ft below land-surface datum, Jan. 21, 1998; lowest measured, 11.68 ft below land-surface datum, Oct. 11, 1995.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 06	9.46	FEB 20	10.80	APR 19	10.37	JUL 18	10.66
WATER YEAR 2001		HIGHEST	9.46	OCT 06, 2000	LOWEST	10.80	FEB 20, 2001





365133076351202. Local number. 58C 58 SOW 141B.

**AQUIFER.**--Middle Potomac aquifer of Cretaceous age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 605 ft, screened 595 to 605 ft.

**DATUM.**--Elevation of land-surface datum is 52 ft above sea level, from topographic map. Measuring point: Top of casing, 0.5 ft above land-surface datum prior to Jan. 12, 1988; 1.5 ft Jan. 12, 1988, to Mar. 12, 1997; 2.38 ft thereafter.

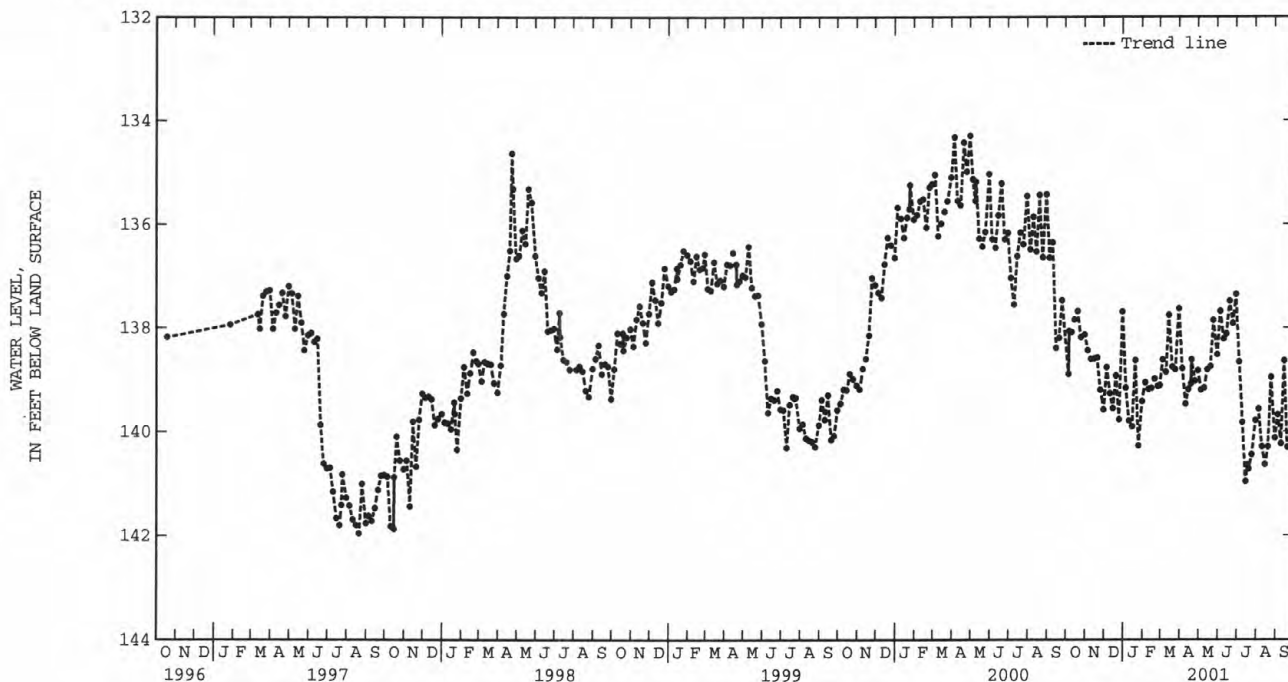
**PERIOD OF RECORD.**--April 1980 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 108.60 ft below land-surface datum, Apr. 24, 1980; lowest measured, 148.99 ft below land-surface datum, Feb. 25, 1994.

**EXTREMES FOR CURRENT YEAR.**--Highest instantaneous water level, 136.18 ft below land-surface datum, Oct. 30; lowest instantaneous water level, 141.27 ft below land-surface datum, Jul. 17.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	138.89	138.43	138.76	139.15	139.05	138.61	138.78	139.19	137.68	138.65	139.56	139.67
10	138.08	138.60	139.26	139.79	139.18	138.85	139.46	139.15	138.21	139.82	140.29	140.23
15	137.84	138.59	139.55	139.90	139.16	137.75	139.18	138.80	138.11	140.96	140.63	138.63
20	137.68	138.57	138.92	138.62	138.98	138.75	138.61	138.74	137.48	140.72	140.29	140.30
25	138.18	139.19	139.76	140.27	139.12	138.80	139.02	137.85	137.91	140.44	138.95	140.28
EOB	138.13	139.57	137.69	139.41	139.10	137.63	138.82	138.51	137.35	139.78	140.12	139.88

WATER YEAR 2001	HIGHEST	137.35	JUN 30, 2001	LOWEST	140.96	JUL 15, 2001
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## GROUND-WATER LEVELS

## CITY OF SUFFOLK

365133076351203. Local number, 58C 59 SOW 141C.

**LOCATION.**--Lat 36°51'34", long 76°35'11", NAD83, Hydrologic Unit 02080208, 500 ft west of old Chuckatuck High School in Chuckatuck. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Brightseat-upper Potomac aquifer of Cretaceous-Paleocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 447 ft., screened 437 to 447 ft.

**INSTRUMENTATION.**--Continuous strip-chart recorder. Prior to May 5, 1981, occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel.

**DATUM.**--Elevation of land-surface datum is 52 ft above sea level, from topographic map. Measuring point: Top of casing, 1.5 ft above land-surface datum.

**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Missing record due to recorder malfunction. Water level affected by local pumpage and regional drawdown.

**PERIOD OF RECORD.**--April 1980 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

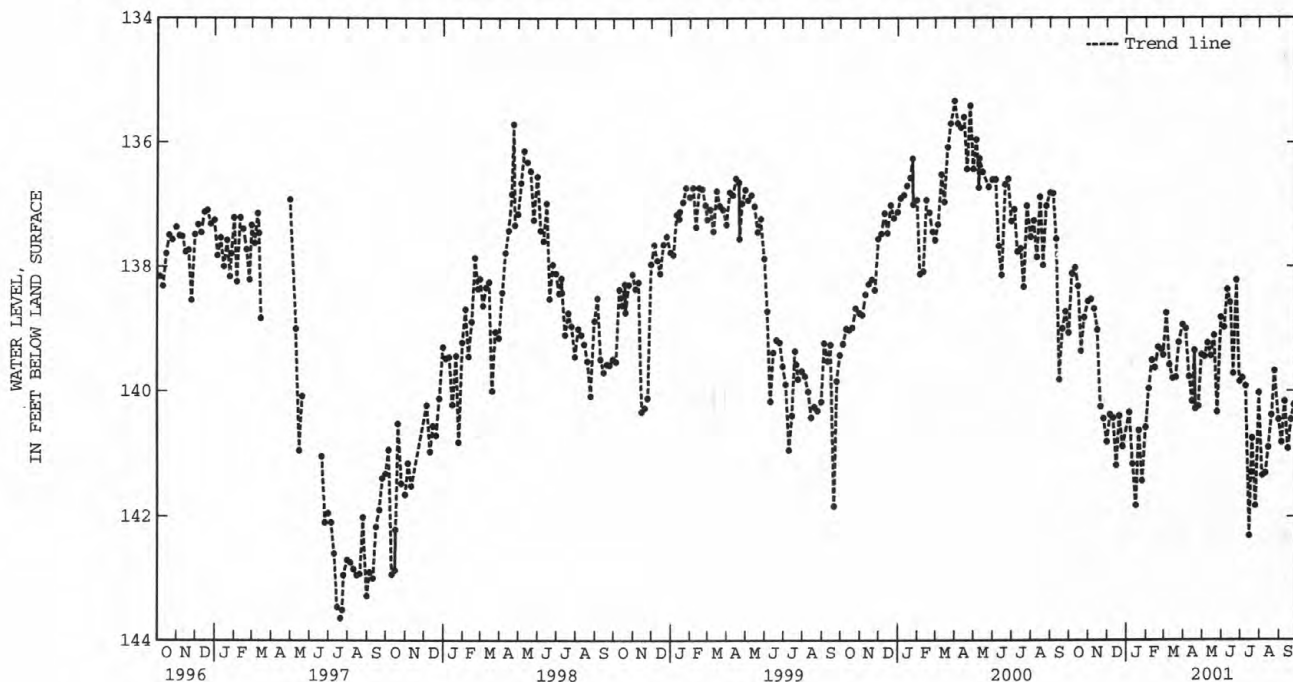
**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 108.80 ft below land-surface datum, Jun. 30, 1980; lowest recorded, 151.00 ft below land-surface datum, Feb. 17, 1994.

**EXTREMES FOR CURRENT YEAR.**--Highest instantaneous water level, 137.32 ft below land-surface datum, Oct. 7, 8; lowest instantaneous water level, 142.37 ft below land-surface datum, Jul. 17.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	138.11	138.53	140.38	140.34	139.96	138.75	139.00	139.45	138.98	139.79	141.34	140.81
10	138.02	138.68	140.43	141.16	139.51	139.58	139.77	139.23	138.37	139.92	141.30	140.16
15	138.32	139.02	141.18	141.83	139.63	139.80	140.16	139.44	138.58	142.31	140.89	140.91
20	139.36	140.25	140.40	140.63	139.30	139.78	140.28	139.11	139.72	140.75	140.38	140.45
25	138.82	140.44	140.88	141.43	139.34	139.22	140.24	140.33	138.22	141.83	139.68	140.22
EOM	138.56	140.81	---	140.58	139.43	138.94	139.42	138.82	139.85	140.40	140.45	140.17

WATER YEAR 2001      HIGHEST 138.02   OCT 10, 2000      LOWEST 142.31   JUL 15, 2001



## GROUND-WATER LEVELS

263

## CITY OF SUFFOLK

365133076351204. Local number, 58C 60 SOW 141D.

**LOCATION.**--Lat 36°51'34", long 76°35'11", NAD83, Hydrologic Unit 02080208, 500 ft west of old Chuckatuck High School in Chuckatuck. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Columbia aquifer of Quaternary age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 20 ft, screened 10 to 20 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 8, 1985, to Jul. 19, 1995, bimonthly measurement with chalked tape. Prior to Oct. 8, 1985, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 50 ft above sea level, from topographic map. Measuring point: Top of casing, 1.5 ft above land-surface datum prior to Jan. 12, 1988; 1.0 ft thereafter.

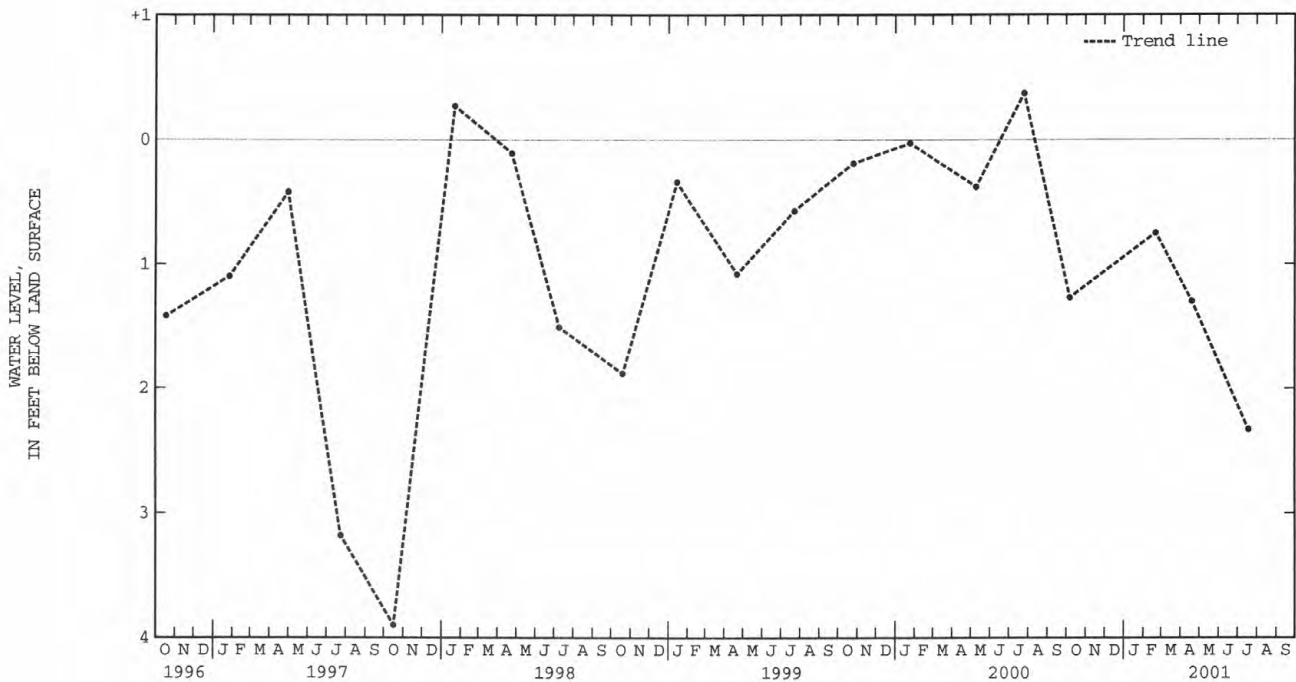
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division.

**PERIOD OF RECORD.**--February 1980 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 0.37 ft above land-surface datum, Jul. 25, 2000; lowest measured, 4.20 ft below land-surface datum, Oct. 15, 1993.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 06	1.27	FEB 20	.75	APR 19	1.30	JUL 18	2.33
WATER YEAR 2001		HIGHEST	.75	FEB 20, 2001	LOWEST	2.33	JUL 18, 2001



## GROUND-WATER LEVELS

## CITY OF SUFFOLK

364731076355501. Local number, 58C 61 SOW 159A.

**LOCATION.**--Lat 36°47'32", long 76°35'54", NAD83, Hydrologic Unit 02080208, 0.5 mi northwest of intersection of State Highways 622 and 634, 2.3 mi northwest of Elephant Fork. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Columbia aquifer of Quaternary age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 25 ft, screened 20 to 25 ft, sounded to 17.50 ft on Jul. 8, 1985, redrilled to 25 ft on May 15, 1990.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 7, 1985, to Jul. 26, 1995, bimonthly measurement with chalked tape. Prior to Oct. 7, 1985, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 40 ft above sea level, from topographic map. Measuring point: Top of casing, 0.85 ft above land-surface datum prior to Jun. 25, 1990; 1.55 ft thereafter.

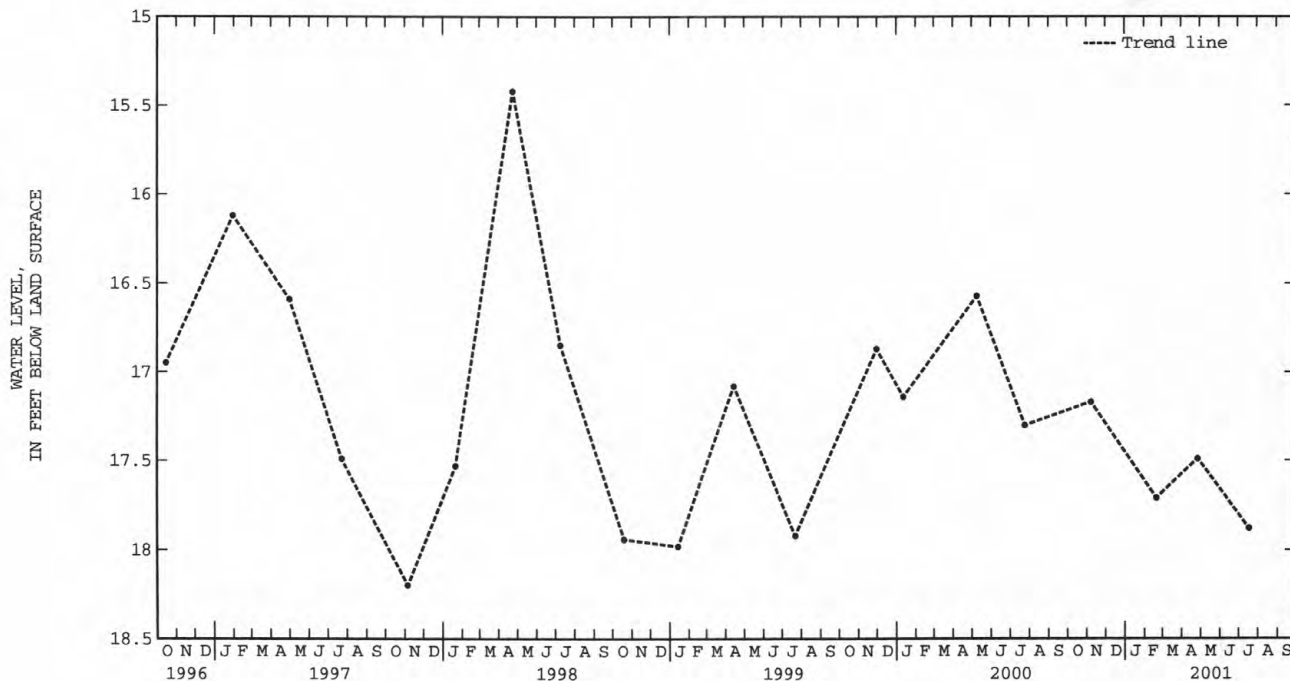
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Well reported dry several days in 1985-1990.

**PERIOD OF RECORD.**--June 1981 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 8.95 ft below land-surface datum, Apr. 19, 1984; lowest measured, 18.70 ft below land-surface datum, Oct. 11, 1995.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 08	17.17	FEB 20	17.71	APR 27	17.49	JUL 18	17.88
WATER YEAR 2001		HIGHEST	17.17	NOV 08, 2000		LOWEST	17.88
							JUL 18, 2001



## GROUND-WATER LEVELS

265

## CITY OF SUFFOLK

364731076355502. Local number, 58C 62 SOW 159B.

**LOCATION.**--at 36°47'32", long 76°35'54", NAD83, Hydrologic Unit 02080208, 0.5 mi northwest of intersection of State Highways 622 and 634, 2.3 mi northwest of Elephant Fork. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Middle Potomac aquifer of Cretaceous age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 2 in., depth 575 ft, screened 555 to 575 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 7, 1985, to Jul. 26, 1995, bimonthly measurement with chalked tape. Prior to Oct. 7, 1985, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 40 ft above sea level, from topographic map. Measuring point: Top of casing, 1.6 ft above land-surface datum.

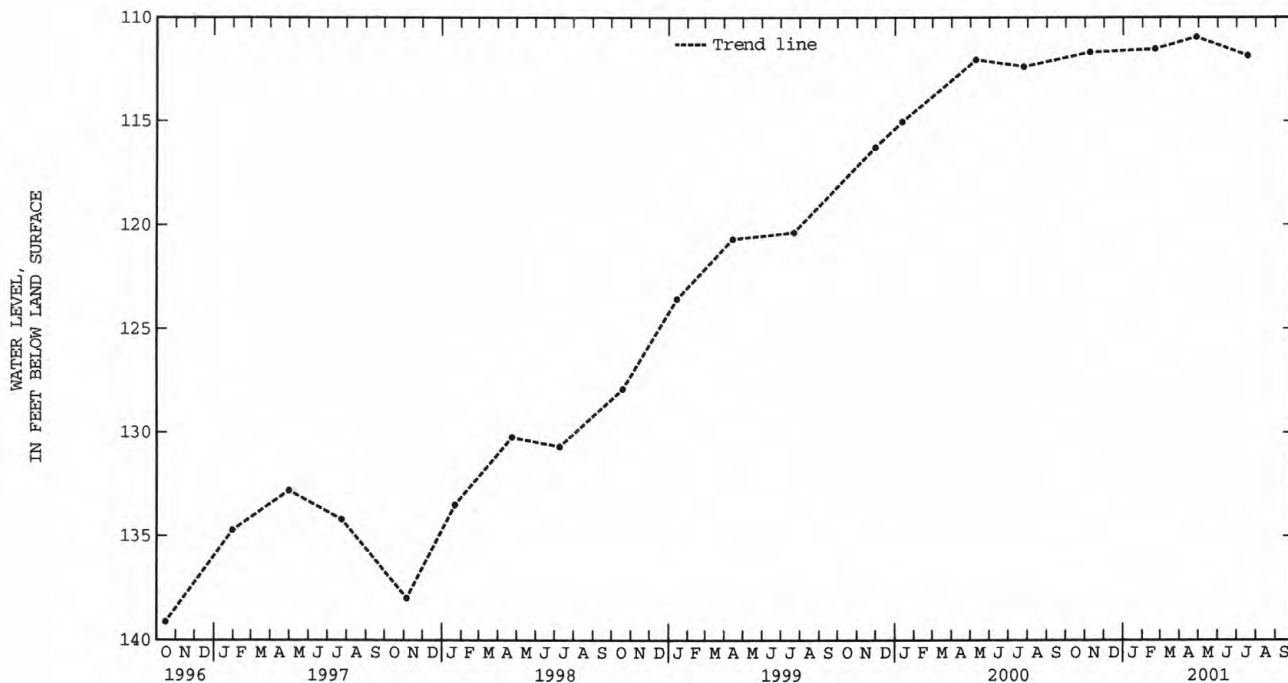
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level may be affected by local pumpage and regional drawdown.

**PERIOD OF RECORD.**--June 1981 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 110.94 ft below land-surface datum, Apr. 27, 2001; lowest measured, 169.26 ft below land-surface datum, Jan. 11, 1994.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 08	111.67	FEB 20	111.52	APR 27	110.94	JUL 18	111.83
WATER YEAR 2001		HIGHEST 110.94		APR 27, 2001		LOWEST 111.83 JUL 18, 2001	



## GROUND-WATER LEVELS

## SURRY COUNTY

370800076500701. Local number, 56F 2 SOW 039.

**LOCATION.**--Lat 37°08'01", long 76°50'06", NAD83, Hydrologic Unit 02080206, off State Highway 10, at Surry County Administration building in Surry. Owner: Town of Surry.

**AQUIFER.**--Aquia aquifer of Paleocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 367 ft, screened 350 to 362 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 8, 1985, to Jul. 10, 1995, bimonthly measurement with chalked tape. Jan. 10, 1976, to Oct. 7, 1985, occasional measurement with chalked tape. Mar. 15, 1971, to Jan. 10, 1976, continuous strip-chart recorder. Prior to Mar. 15, 1971, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 122 ft above sea level, from topographic map. Measuring point: Top of casing, 1.1 ft above land-surface datum.

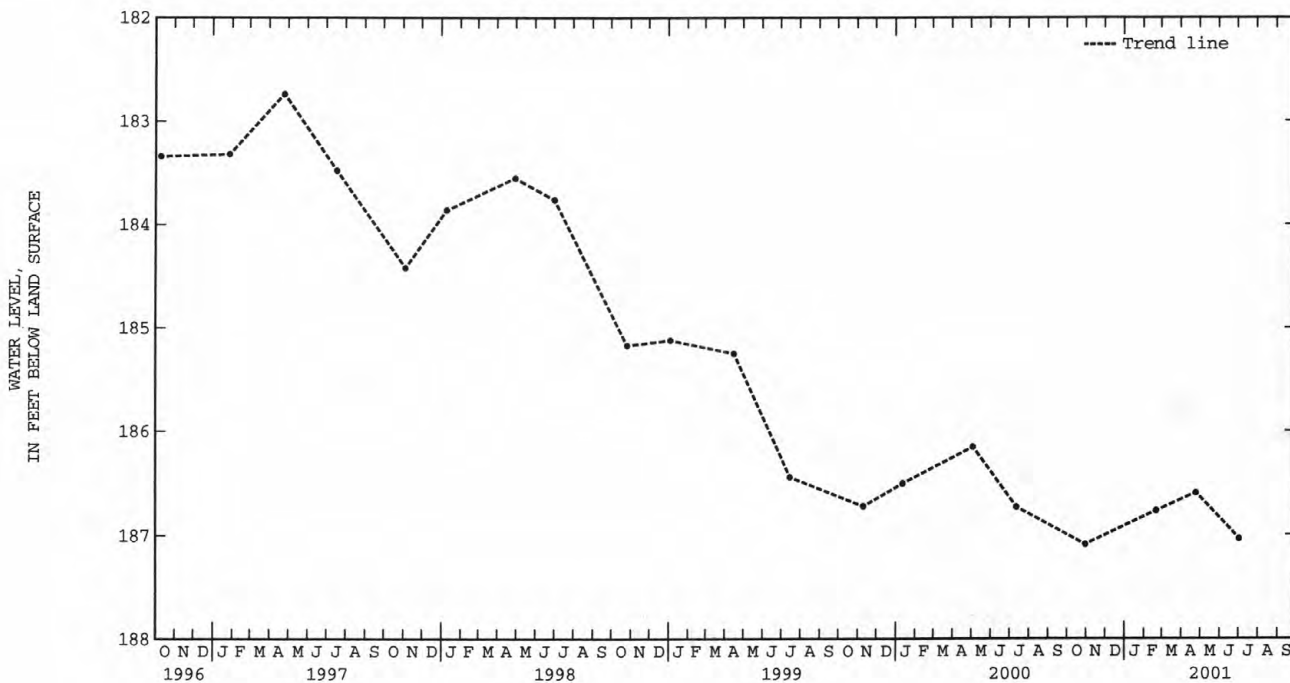
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

**PERIOD OF RECORD.**--December 1970 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 146.43 ft below land-surface datum, Mar. 25, 1971; lowest measured, 187.09 ft below land-surface datum, Oct. 30, 2000.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30	187.09	FEB 20	186.77	APR 24	186.60	JUL 02	187.04
WATER YEAR 2001		HIGHEST	186.60	APR 24, 2001		LOWEST	187.09
							OCT 30, 2000





## GROUND-WATER LEVELS

267

## SURRY COUNTY

370712076413201. Local number, 57E 11 SOW 094A.

**LOCATION.**--Lat 37°07'13", long 76°41'31", NAD83, Hydrologic Unit 02080206, 0.5 mi east of State Highway 690, 2.5 mi northwest of Bacons Castle. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Middle Potomac aquifer of Cretaceous age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 605 ft, screened 595 to 605 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 7, 1985, to Jul. 10, 1995, bimonthly measurement with chalked tape. Prior to Oct. 7, 1985, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 45 ft above sea level, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum.

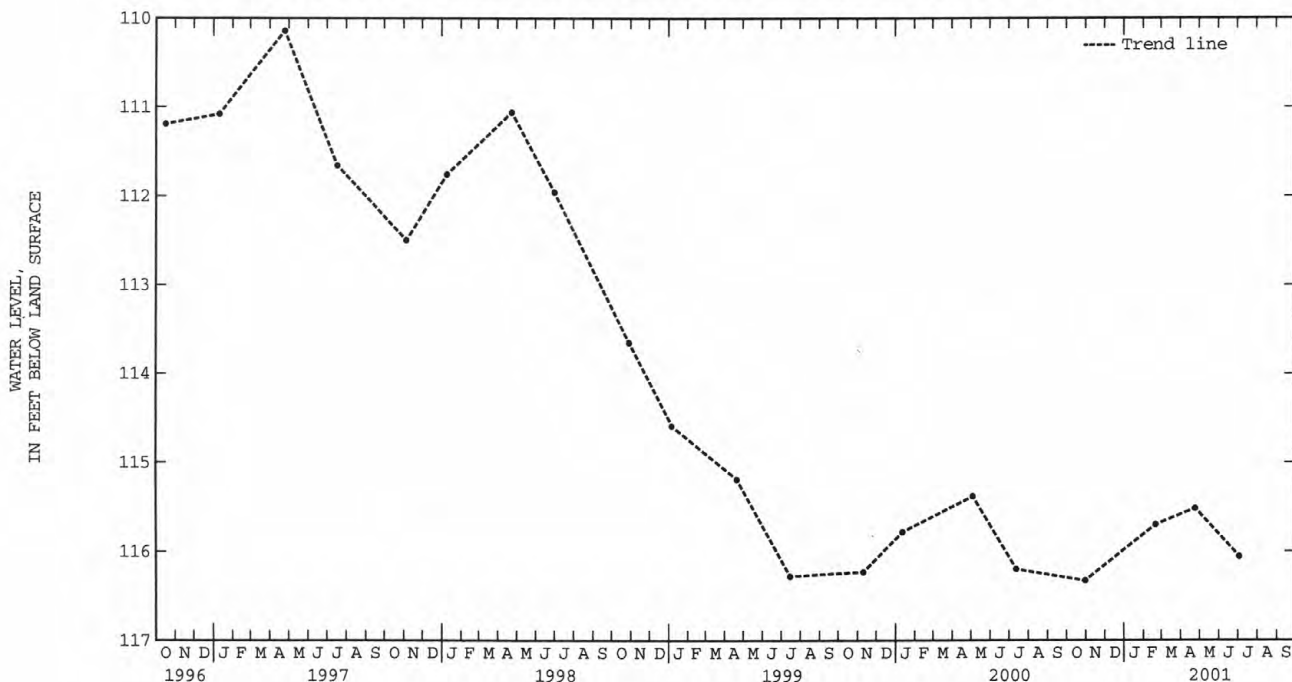
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage and regional drawdown.

**PERIOD OF RECORD.**--July 1978 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 92.19 ft below land-surface datum, Jul. 24, 1980; lowest measured, 116.33 ft below land-surface datum, Oct. 30, 2000.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30	116.33	FEB 20	115.70	APR 24	115.52	JUL 03	116.06
WATER YEAR 2001		HIGHEST	115.52	APR 24, 2001		LOWEST	116.33
							OCT 30, 2000



## GROUND-WATER LEVELS

## SURRY COUNTY

370712076413203. Local number, 57E 13 SOW 094C.

**LOCATION.**--Lat 37°07'13", long 76°41'31", NAD83, Hydrologic Unit 02080206, 0.5 mi east of State Highway 690, 2.5 mi northwest of Bacons Castle. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Yorktown-Eastover aquifer of Miocene-Pliocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in. to 41 ft, diameter 3 in. from 41 to 46 ft, depth 46 ft, screened 41 to 46 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 7, 1985, to Jul. 10, 1995, bimonthly measurement with chalked tape. Prior to Oct. 7, 1985, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 45 ft above sea level, from topographic map. Measuring point: Top of casing, 1.6 ft above land-surface datum.

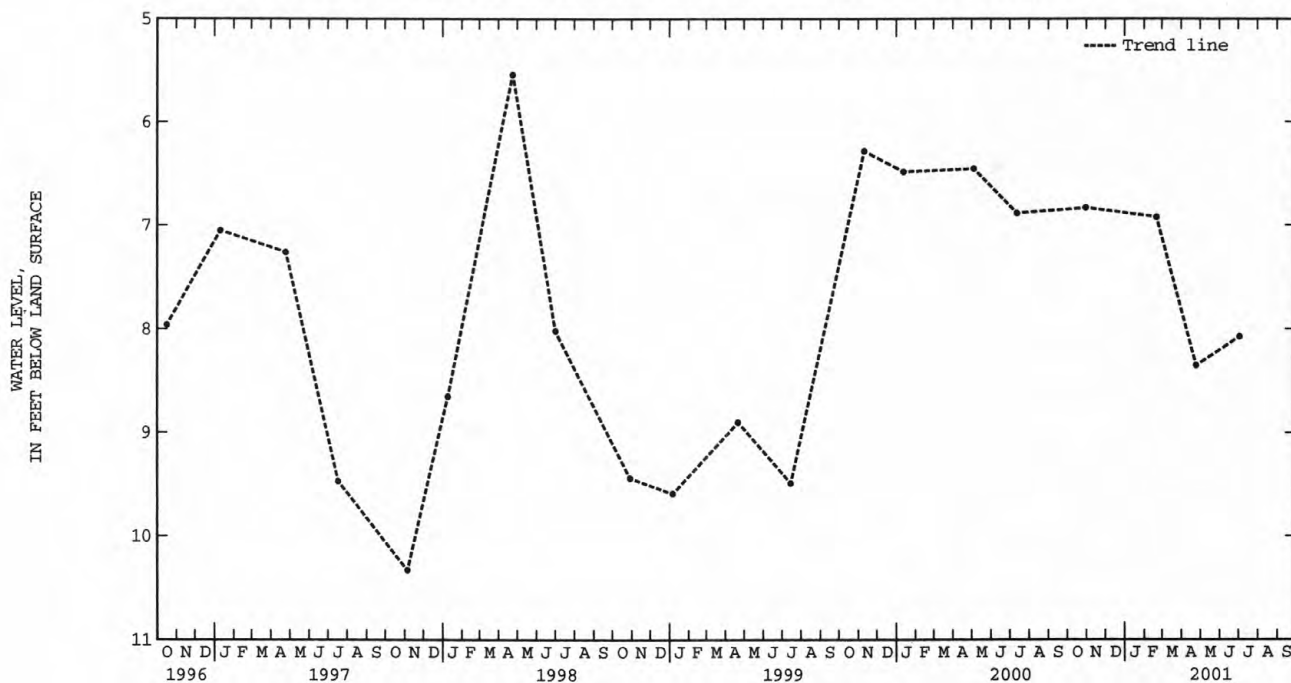
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division.

**PERIOD OF RECORD.**--July 1978 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 3.90 ft below land-surface datum, May 29, 1980; lowest measured, 11.17 ft below land-surface datum, Dec. 13, 1981.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30	6.83	FEB 20	6.92	APR 24	8.35	JUL 03	8.07
WATER YEAR 2001		HIGHEST	6.83	OCT 30, 2000	LOWEST	8.35	APR 24, 2001



## GROUND-WATER LEVELS

269

## SURRY COUNTY

371132076405501. Local number, 57F 16 SOW 087A.

**LOCATION.**--Lat 37°11'33", long 76°40'54", NAD83, Hydrologic Unit 02080206, at the end of State Highway 650 in Homewood, 7.6 mi northeast of Bacons Castle. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Lower Potomac aquifer of Cretaceous age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 1,206 ft, screened 1,170 to 1,185 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 7, 1985, to Jul. 10, 1995, bimonthly measurement with chalked tape. Prior to Oct. 7, 1985, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 5 ft above sea level, from topographic map. Measuring point: Top of casing, 1.5 ft above land-surface datum.

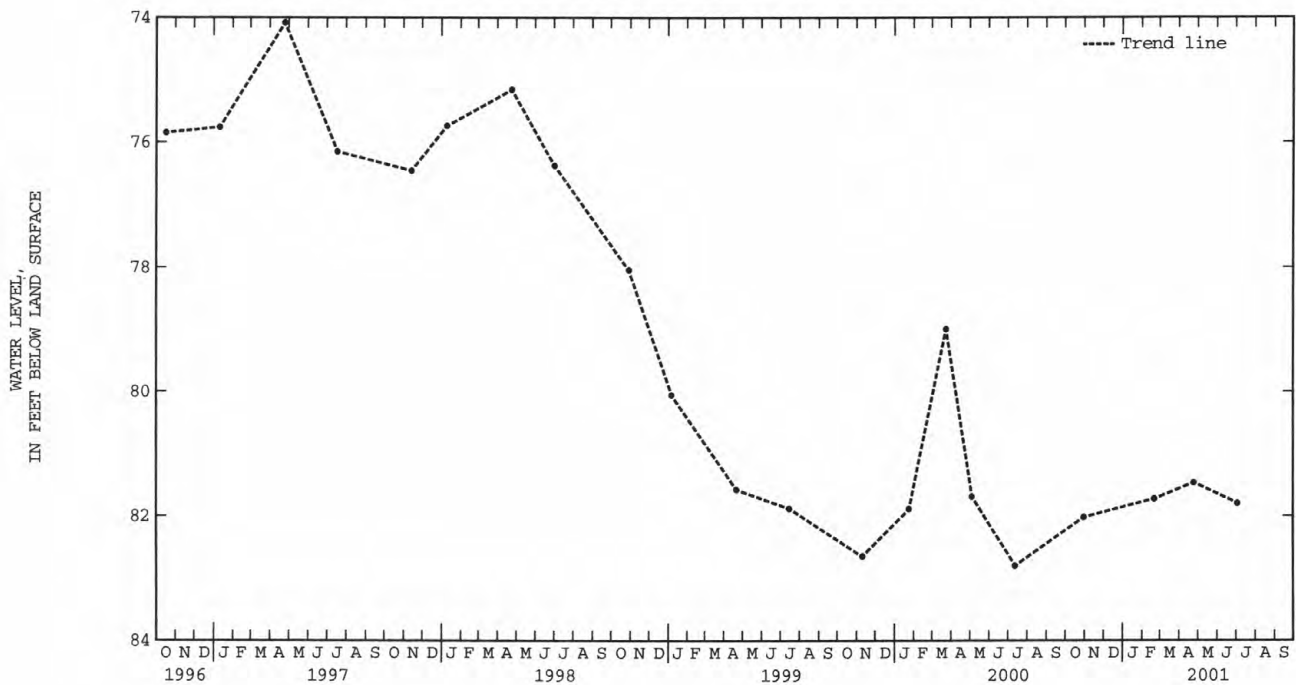
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage and regional drawdown. Water from this well is known to contain concentrations of dissolved solids greater than 1,000 mg/L.

**PERIOD OF RECORD.**--July 1978 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 53.22 ft below land-surface datum, Jul. 20, 1978; lowest measured, 82.80 ft below land-surface datum, Jul. 12, 2000.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30	82.02	FEB 20	81.73	APR 24	81.47	JUL 03	81.80
WATER YEAR 2001		HIGHEST	81.47	APR 24, 2001		LOWEST	82.02
							OCT 30, 2000



## GROUND-WATER LEVELS

## SURRY COUNTY

371132076405502. Local number, 57F 24 SOW 087B.

**LOCATION.**--Lat 37°11'33", long 76°40'54", NAD83, Hydrologic Unit 02080206, at the end of State Highway 650 in Homewood, 7.6 mi northeast of Bacons Castle. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Middle Potomac aquifer of Cretaceous age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 520 ft, screened 510 to 520 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 7, 1985, to Jul. 10, 1995, bimonthly measurement with chalked tape. Prior to Oct. 7, 1985, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 5 ft above sea level, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum.

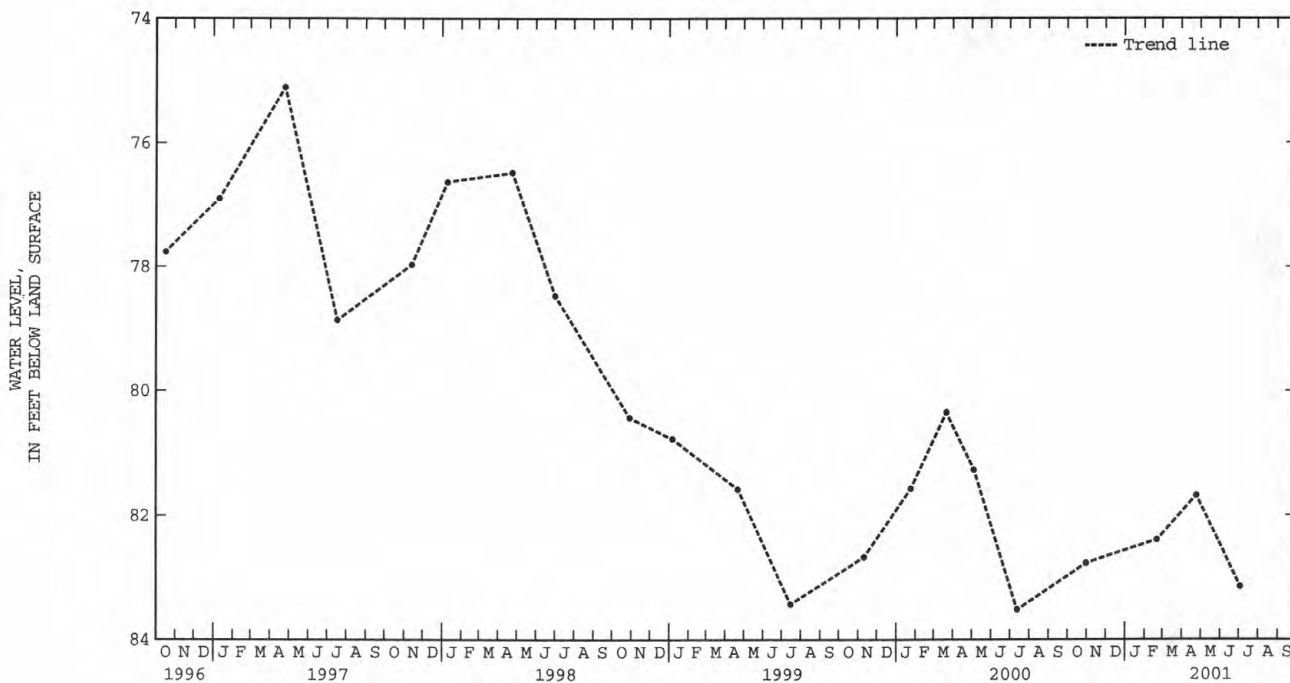
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage and regional drawdown.

**PERIOD OF RECORD.**--July 1978 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 62.17 ft below land-surface datum, Aug. 17, 1982; lowest measured, 84.60 ft below land-surface datum, Nov. 3, 1993.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30	82.77	FEB 20	82.40	APR 24	81.68	JUL 03	83.15
WATER YEAR 2001		HIGHEST	81.68	APR 24, 2001	LOWEST	83.15	JUL 03, 2001



## GROUND-WATER LEVELS

271

## SUSSEX COUNTY

365530077104002. Local number, 53D 6 SOW 179A.

**LOCATION.**--Lat 36°55'31", long 77°10'39", NAD83, Hydrologic Unit 03010201, off State Highway 634, 1.4 mi south of State Highway 35, and 1.7 mi southeast of Homeville. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Lower Potomac aquifer of Cretaceous age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4.5 in. to 460 ft, diameter 2 in., 439 ft to 460 ft, depth 470 ft, screened 460 to 470 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by USGS personnel. Prior to Mar. 1, 1988, digital recorder 60-minute punch.

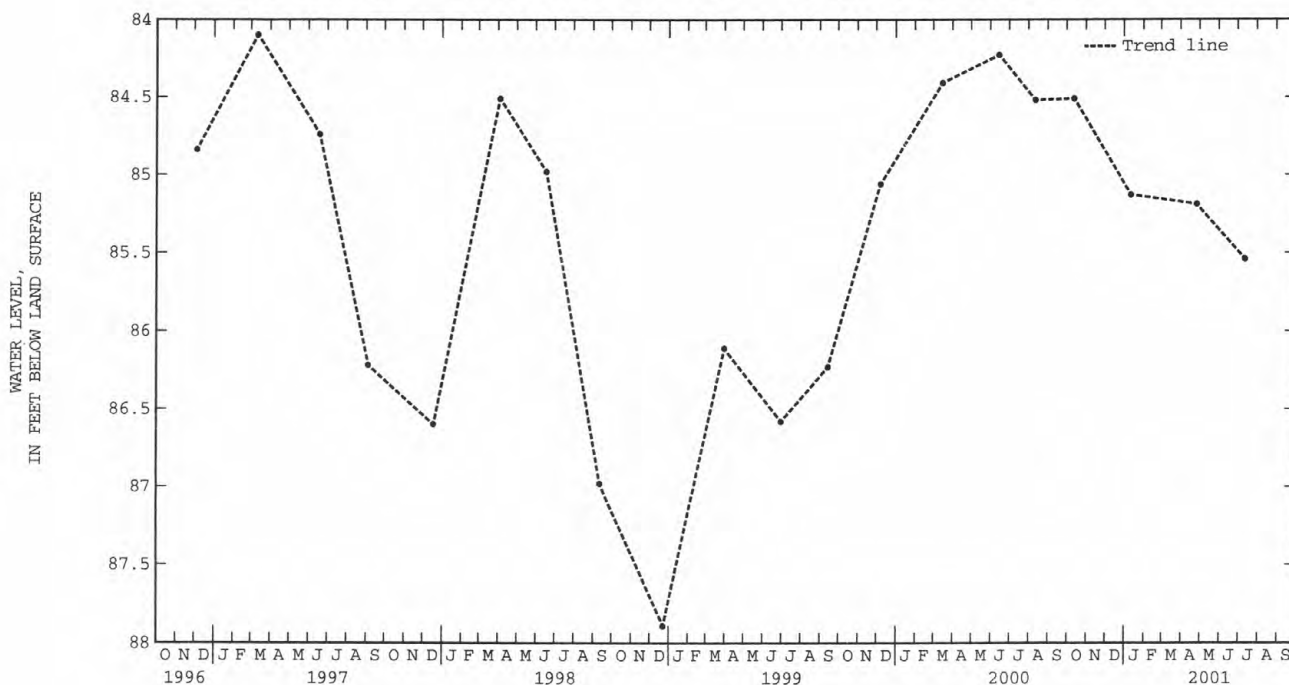
**DATUM.**--Elevation of land-surface datum is 90 ft above sea level, from topographic map. Measuring point: Top of casing, 1.0 ft above land-surface datum.

**PERIOD OF RECORD.**--November 1985 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level recorded, 78.50 ft below land-surface datum, Feb. 12, 1988; lowest measured, 87.89 ft below land-surface datum, Dec. 22, 1998.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 12	84.51	JAN 11	85.13	APR 26	85.19	JUL 12	85.54
WATER YEAR 2001		HIGHEST 84.51 OCT 12, 2000		LOWEST 85.54 JUL 12, 2001			



## GROUND-WATER LEVELS

## SUSSEX COUNTY

365530077104006. Local number, 53D 10 SOW 179E.

**LOCATION.**--Lat 36°55'31", long 77°10'39", NAD83, Hydrologic Unit 03010201, off State Highway 634, 1.4 mi south of State Highway 35, and 1.7 mi southeast of Homeville. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Middle Potomac aquifer of Cretaceous age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4.5 in. to 130 ft, diameter 4 in. from 140 to 145 ft, depth 145 ft, screened 130 to 140 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by USGS personnel. Prior to Mar. 1, 1988, digital recorder 60-minute punch.

**DATUM.**--Elevation of land-surface datum is 90 ft above sea level, from topographic map. Measuring point: Top of casing, 1.3 ft above land-surface datum.

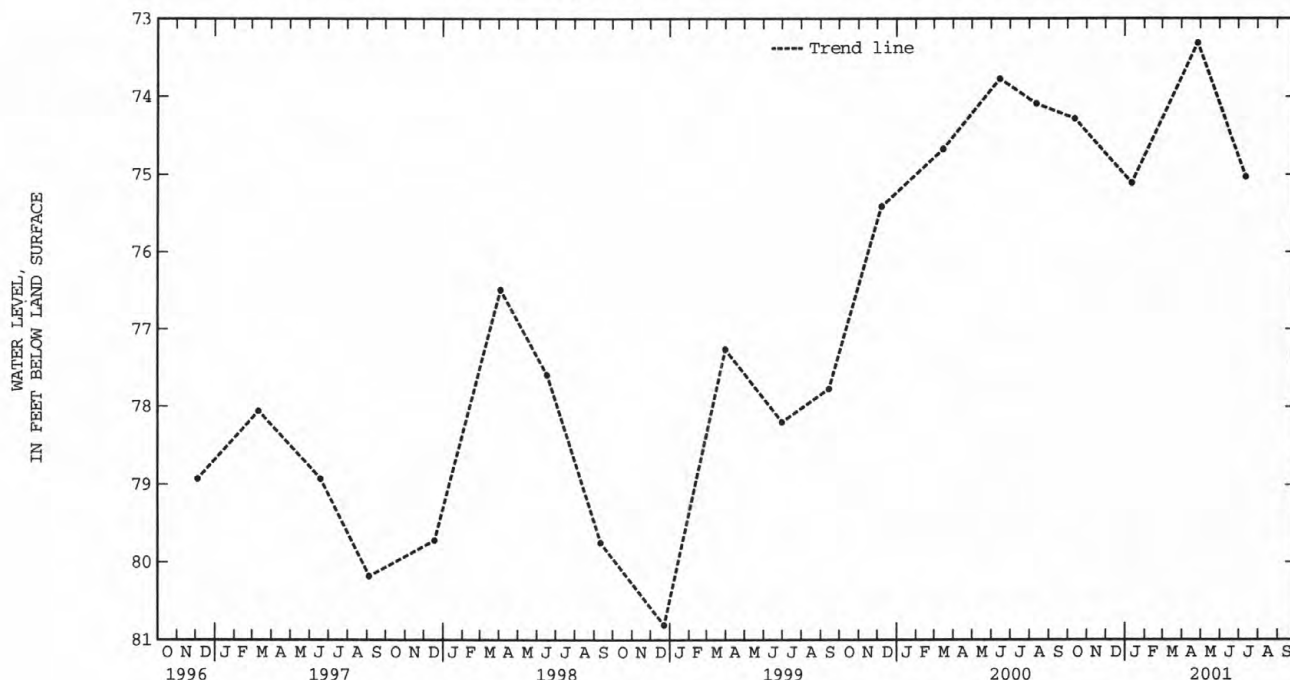
**REMARKS.**--Water level affected by local pumpage and regional drawdown.

**PERIOD OF RECORD.**--December 1985 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 73.31 ft below land-surface datum, Apr. 26, 2001; lowest measured, 82.50 ft below land-surface datum, Sep. 12, 1995.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 12	74.28	JAN 11	75.11	APR 26	73.31	JUL 12	75.03
WATER YEAR 2001		HIGHEST	73.31	APR 26, 2001		LOWEST	75.11
							JAN 11, 2001





## GROUND-WATER LEVELS

273

## SUSSEX COUNTY

365530077104007. Local number, 53D 11 SOW 179F.

**LOCATION.**--Lat 36°55'31", long 77°10'39", NAD83, Hydrologic Unit 03010201, off State Highway 634, 1.4 mi south of State Highway 35, and 1.7 mi southeast of Homeville. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Aquia aquifer of Paleocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4.5 in. to 82 ft, diameter 4 in. from 92 to 97 ft, depth 97 ft, screened 82 to 92 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by USGS personnel. Prior to Mar. 1, 1988, digital recorder 60-minute punch.

**DATUM.**--Elevation of land-surface datum is 90 ft above sea level, from topographic map. Measuring point: Top of casing, 1.0 ft above land-surface datum.

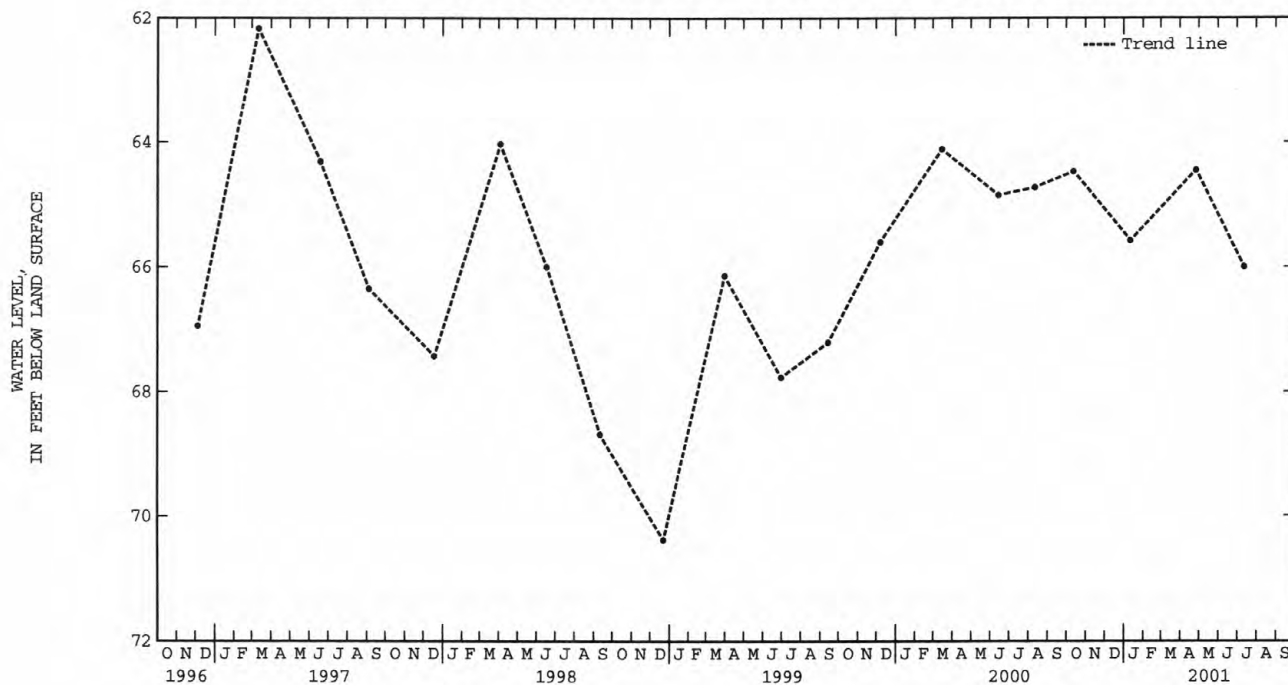
**REMARKS.**--Water level affected by local pumpage.

**PERIOD OF RECORD.**--December 1985 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 62.17 ft below land-surface datum, Mar. 11, 1997; lowest recorded, 77.16 ft below land-surface datum, Nov. 28 to Dec. 1, 1987.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 12	64.47	JAN 11	65.58	APR 26	64.45	JUL 12	66.00
WATER YEAR 2001		HIGHEST	64.45	APR 26, 2001		LOWEST	66.00 JUL 12, 2001



## GROUND-WATER LEVELS

## SUSSEX COUNTY

365235077150501. Local number, 53E 5 SOW 045.

**LOCATION.**--Lat 37°02'38", long 77°11'29", NAD83, Hydrologic Unit 03010201, 400 ft northeast of State Highway 625, 2.5 mi north of Newville. Owner: Butler Lumber Company.

**AQUIFER.**--Aquia aquifer of Paleocene age.

**WELL CHARACTERISTICS.**--Drilled unused water well, diameter 4 in., depth 172 ft, screened 162 to 172 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by USGS personnel. Prior to Mar. 1, 1989, bimonthly measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel.

**DATUM.**--Elevation of land-surface datum is 126.65 ft above sea level. Measuring point: Top of casing, 0.3 ft above land-surface datum prior to Mar. 8, 1988; 1.2 ft thereafter.

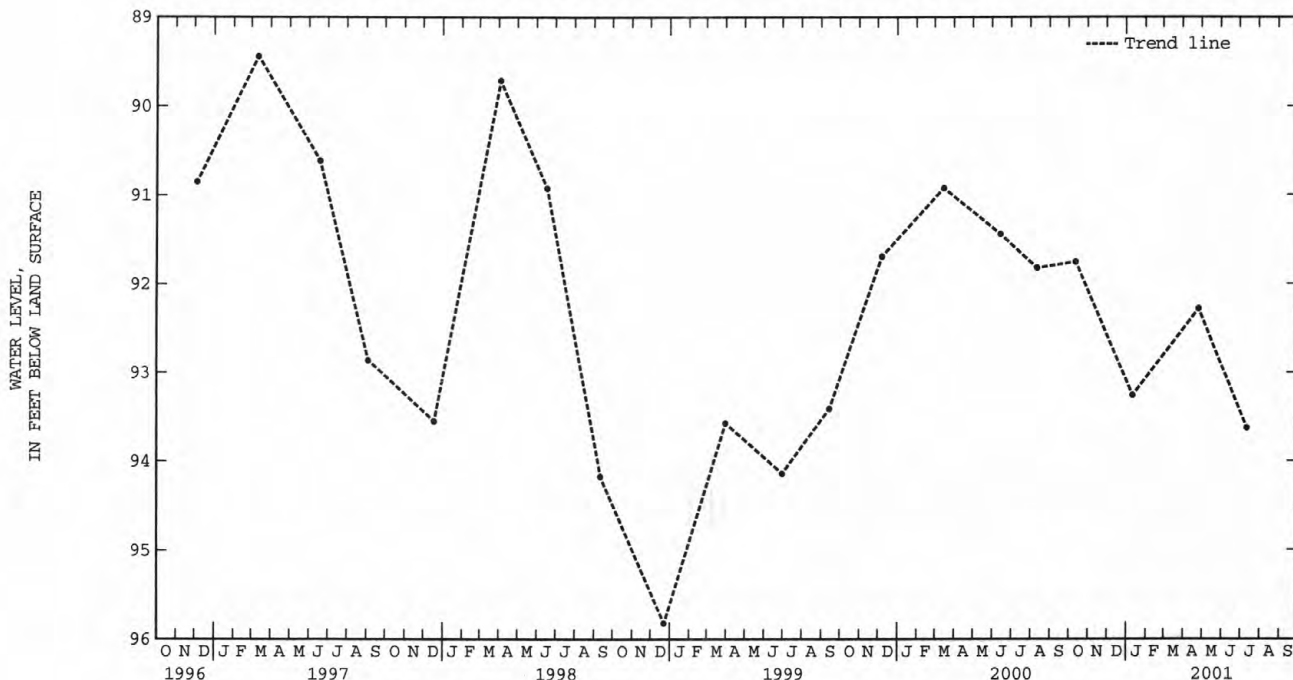
**REMARKS.**--Water level affected by local pumpage and regional drawdown.

**PERIOD OF RECORD.**--September 1971, October 1974 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 81.90 ft below land-surface datum, Mar. 16, 1976; lowest measured, 95.82 ft below land-surface datum, Dec. 22, 1998.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 12	91.75	JAN 11	93.26	APR 26	92.28	JUL 12	93.63
WATER YEAR 2001		HIGHEST	91.75	OCT 12, 2000	LOWEST	93.63	JUL 12, 2001



## GROUND-WATER LEVELS

275

## CITY OF VIRGINIA BEACH

364850076120701. Local number, 61C 23 SOW 129.

**LOCATION.**--Lat 36°48'51", long 76°12'06", NAD83, Hydrologic Unit 02080208, at Woodstock Elementary School in Virginia Beach.  
Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Yorktown-Eastover aquifer of Miocene-Pliocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 8 in. to 68 ft, diameter 6 in. from 68 to 78 ft, depth 78 ft, screened 68 to 73 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 9, 1985, to Jul. 5, 1995, bimonthly measurement with chalked tape. Prior to Oct. 9, 1985, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 15 ft above sea level, from topographic map. Measuring point: Top of casing, 0.1 ft above land-surface datum.

**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division.

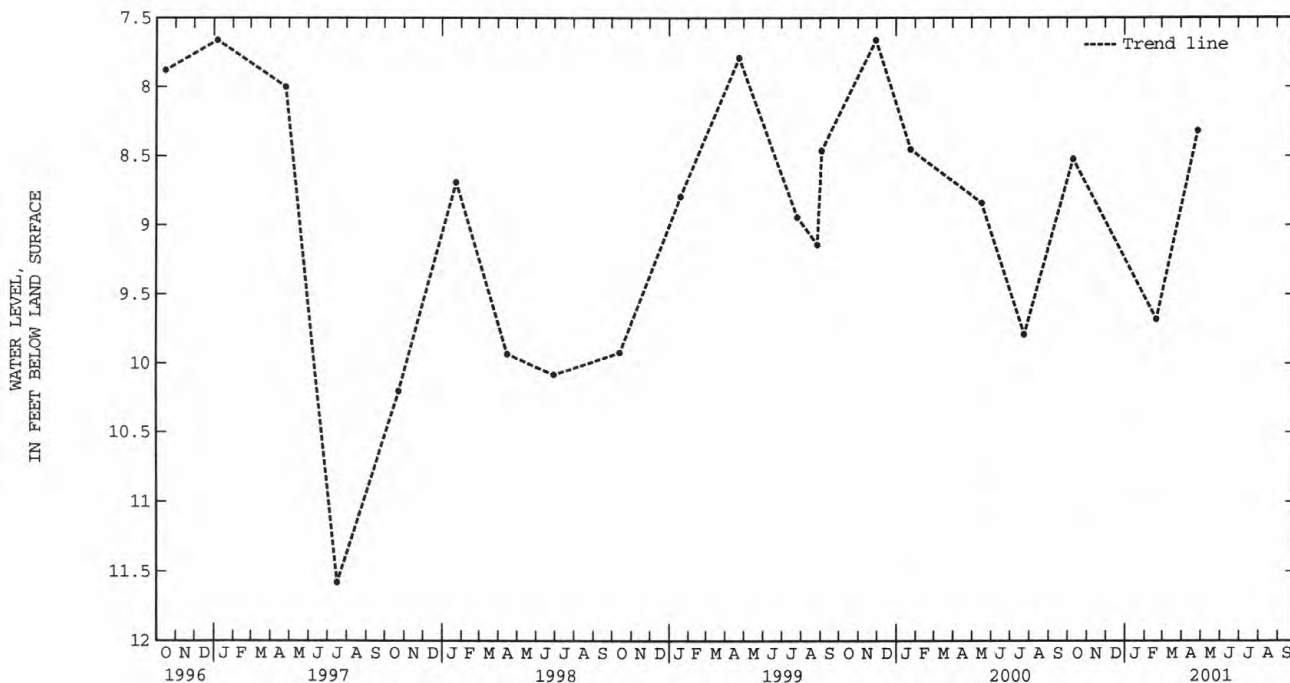
**PERIOD OF RECORD.**--April 1978 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 7.34 ft below land-surface datum, Apr. 22, 1994; lowest measured, 17.77 ft below land-surface datum, Aug. 26, 1983.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 10	8.52	FEB 20	9.68	APR 27	8.32

WATER YEAR 2001	HIGHEST	8.32	APR 27, 2001	LOWEST	9.68	FEB 20, 2001
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## GROUND-WATER LEVELS

## CITY OF VIRGINIA BEACH

364920076093201. Local number, 61C 27 SOW 174A.

**LOCATION.**--Lat 36°49'21", long 76°09'28", NAD83, Hydrologic Unit 02080208, at Kempsville High School in Virginia Beach. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Yorktown-Eastover aquifer of Miocene-Pliocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 3 in., depth 175 ft, screened 160 to 170 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 9, 1985, to Jul. 5, 1995, bimonthly measurement with chalked tape. Prior to Oct. 9, 1985, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 15 ft above sea level, from topographic map. Measuring point: Top of casing, 0.8 ft above land-surface datum.

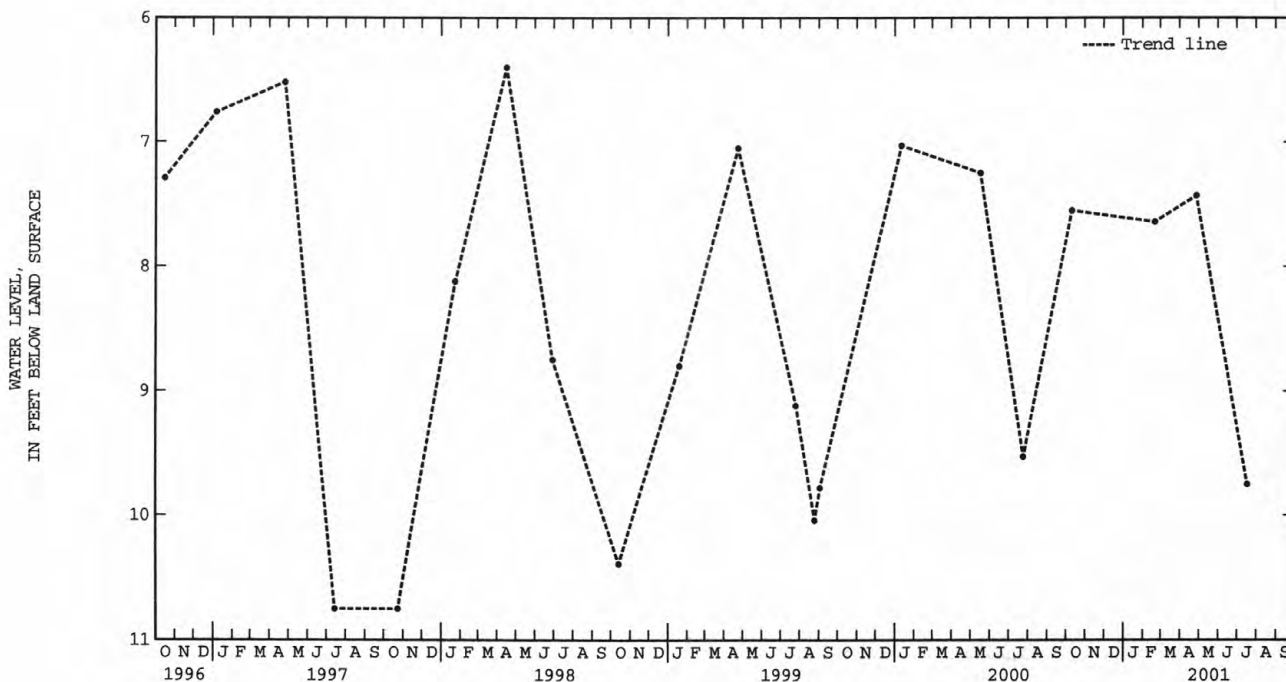
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division.

**PERIOD OF RECORD.**--April 1984 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 6.09 ft below land-surface datum, Apr. 25, 1984; lowest measured, 11.73 ft below land-surface datum, Aug. 6, 1986.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 10	7.55	FEB 20	7.64	APR 27	7.43	JUL 18	9.75
WATER YEAR 2001		HIGHEST	7.43	APR 27, 2001	LOWEST	9.75	JUL 18, 2001



## GROUND-WATER LEVELS

277

## CITY OF VIRGINIA BEACH

364920076093202. Local number, 61C 28 SOW 174B.

**LOCATION.**--Lat 36°49'14", long 76°09'18", NAD83, Hydrologic Unit 02080208, at Kempsville High School in Virginia Beach. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Yorktown-Eastover aquifer of Miocene-Pliocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 3 in., depth 80 ft, screened 65 to 75 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 9, 1985 to Jul. 5, 1995, bimonthly measurement with chalked tape. Prior to Oct. 9, 1985, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 15 ft above sea level, from topographic map. Measuring point: Top of casing, 1.2 ft above land-surface datum.

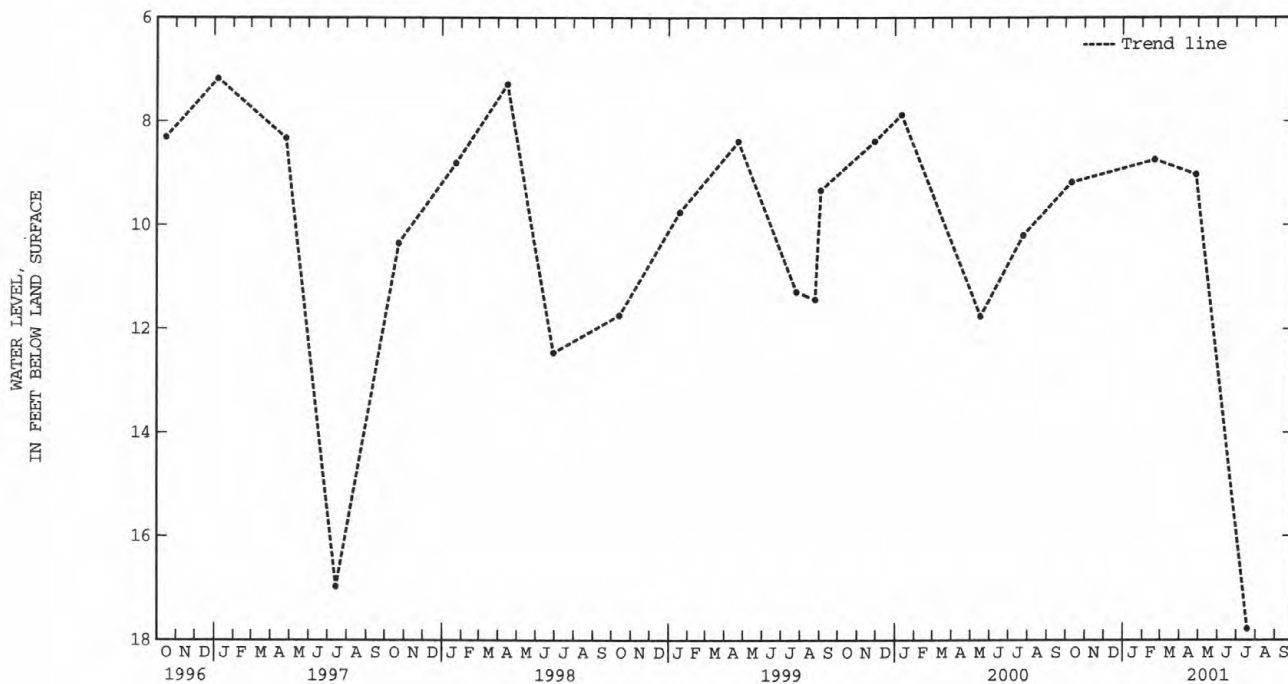
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division.

**PERIOD OF RECORD.**--April 1984 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 6.51 ft below land-surface datum, Apr. 25, 1984; lowest measured, 17.99 ft below land-surface datum, Jul. 18, 1986.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 10	9.18	FEB 20	8.75	APR 27	9.03	JUL 18	17.78
WATER YEAR 2001		HIGHEST	8.75	FEB 20, 2001	LOWEST	17.78	JUL 18, 2001



## GROUND-WATER LEVELS

## CITY OF VIRGINIA BEACH

365425076105001. Local number, 61D 5 SOW 155.

**LOCATION.**--Lat 36°54'26", long 76°10'49", NAD83, Hydrologic Unit 02080108, 100 ft east of Ferry Road, 0.3 mi northwest of Diamond Springs Road in Virginia Beach. Owner: City of Virginia Beach.

**AQUIFER.**--Middle Potomac aquifer of Cretaceous age.

**WELL CHARACTERISTICS.**--Drilled unused water well, diameter 12 in. to 102 ft, diameter 6 in. from 102 to 150 ft, diameter 4 in. from 150 to 1,380 ft, depth 1,380 ft, screened 1,207 to 1,229 ft, 1,250 to 1,264 ft, 1,286 to 1,306 ft, 1,345 to 1,367 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 9, 1985, to Jul. 5, 1995, bimonthly measurement with chalked tape. Prior to Oct. 9, 1985, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 11 ft above sea level, from topographic map. Measuring point: Top of casing, 2.8 ft above land-surface datum.

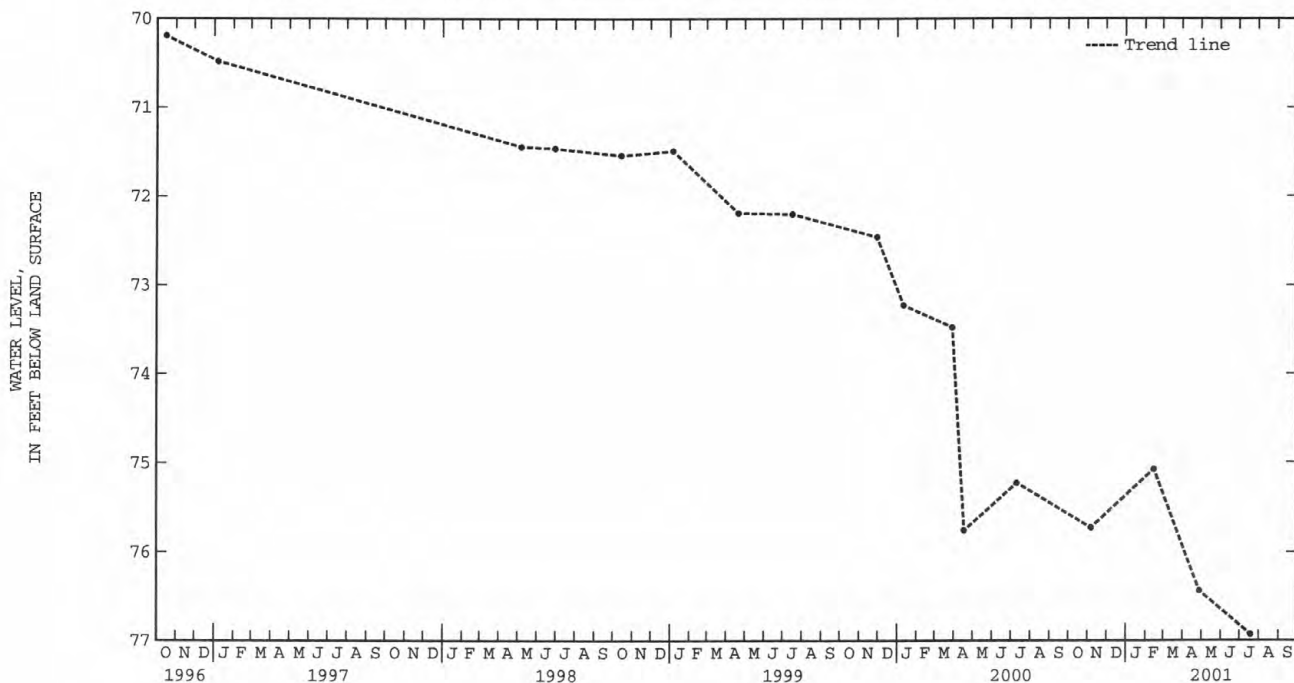
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

**PERIOD OF RECORD.**--December 1980 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 49.75 ft below land-surface datum, Dec. 17, 1980; lowest measured, 76.93 ft below land-surface datum, Jul. 18, 2001.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 06	75.73	FEB 14	75.08	APR 27	76.44	JUL 18	76.93
WATER YEAR 2001		HIGHEST	75.08	FEB 14, 2001	LOWEST	76.93	JUL 18, 2001





## GROUND-WATER LEVELS

279

## CITY OF VIRGINIA BEACH

363537076061001. Local number, 62A 2 SOW 097A.

**LOCATION.**--Lat 36°33'56", long 76°06'15", NAD83, Hydrologic Unit 03010205, 0.2 mi south of Baum Road, 0.25 mi west of Craggs Causeway in Virginia Beach. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Columbia aquifer of Quaternary age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 76 ft, screened 66 to 76 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 9, 1985, to Jul. 5, 1995, bimonthly measurement with chalked tape. Prior to Oct. 9, 1985, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 10 ft above sea level, from topographic map. Measuring point: Top of casing, 1.5 ft above land-surface datum prior to Aug. 3, 1988; at land-surface datum Aug. 3, 1988, to Mar. 13, 1989; 0.65 ft Mar. 13, 1989, to Apr. 1, 1991; 1.65 ft thereafter.

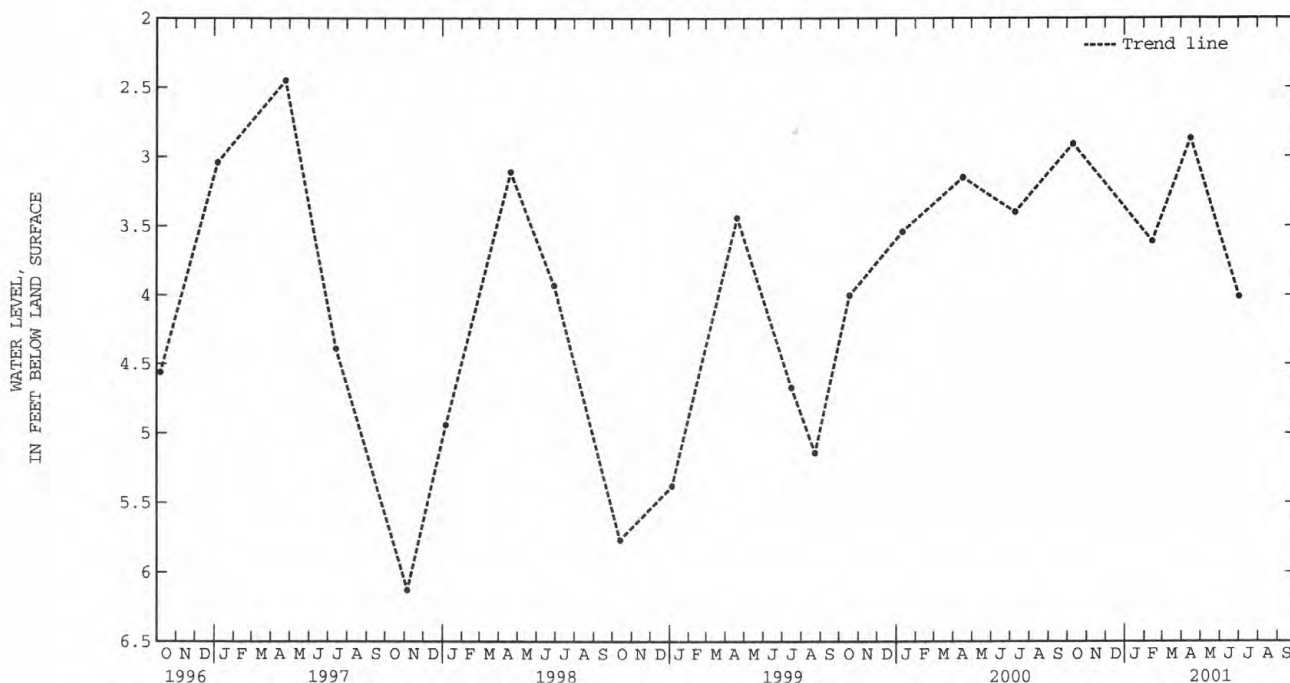
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division.

**PERIOD OF RECORD.**--July 1979 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 1.18 ft below land-surface datum, Apr. 30, 1980; lowest measured, 6.68 ft below land-surface datum, Nov. 28, 1983.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 10	2.91	FEB 14	3.61	APR 16	2.87	JUL 02	4.01
WATER YEAR 2001		HIGHEST	2.87	APR 16, 2001		LOWEST	4.01 JUL 02, 2001



## GROUND-WATER LEVELS

## CITY OF VIRGINIA BEACH

364126076003501. Local number, 62B 1 SOW 098A.

**LOCATION.**--Lat 36°41'28", long 76°00'34", NAD83, Hydrologic Unit 03010205, on north side of Pleasant Ridge Road at the Virginia Beach Mosquito Control shop, 0.9 mi east of Pleasant Ridge in Virginia Beach. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Columbia aquifer of Quaternary age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 24 ft, screened 20 to 24 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 9, 1985, to Jul. 5, 1995, bimonthly measurement with chalked tape. Prior to Oct. 9, 1985, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 10 ft above sea level, from topographic map. Measuring point: Top of casing, 0.8 ft above land-surface datum prior to Mar. 2, 1988; 1.05 ft thereafter.

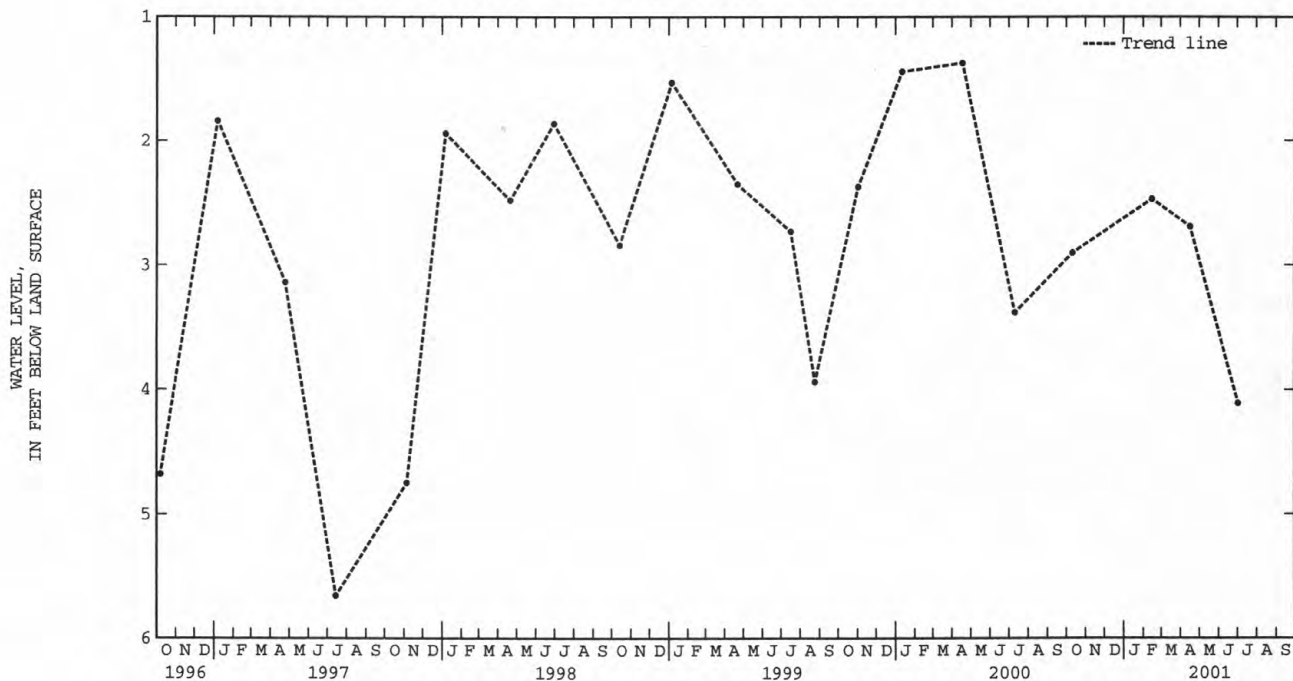
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division.

**PERIOD OF RECORD.**--June 1979 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 1.02 ft below land-surface datum, Apr. 1, 1991; lowest measured, 11.95 ft below land-surface datum, Sep. 16, 1980.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 10	2.90	FEB 14	2.47	APR 16	2.69	JUL 02	4.11
WATER YEAR 2001		HIGHEST	2.47	FEB 14, 2001	LOWEST	4.11	JUL 02, 2001



## GROUND-WATER LEVELS

281

## CITY OF VIRGINIA BEACH

364126076003502. Local number, 62B 2 SOW 098B.

**LOCATION.**--Lat 36°41'27", long 76°00'34", NAD83, Hydrologic Unit 03010205, on north side of Pleasant Ridge Road at the Virginia Beach Mosquito Control shop, 0.9 mi east of Pleasant Ridge in Virginia Beach. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Columbia aquifer of Quaternary age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 98 ft, screened 88 to 98 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 9, 1985, to Jul. 5, 1995, bimonthly measurement with chalked tape. Prior to Oct. 9, 1985, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 10 ft above sea level, from topographic map. Measuring point: Top of casing, 0.8 ft above land-surface datum prior to Mar. 2, 1988; 1.2 ft above land-surface datum Mar. 3, 1988, to Dec. 9, 1994; 0.8 ft thereafter.

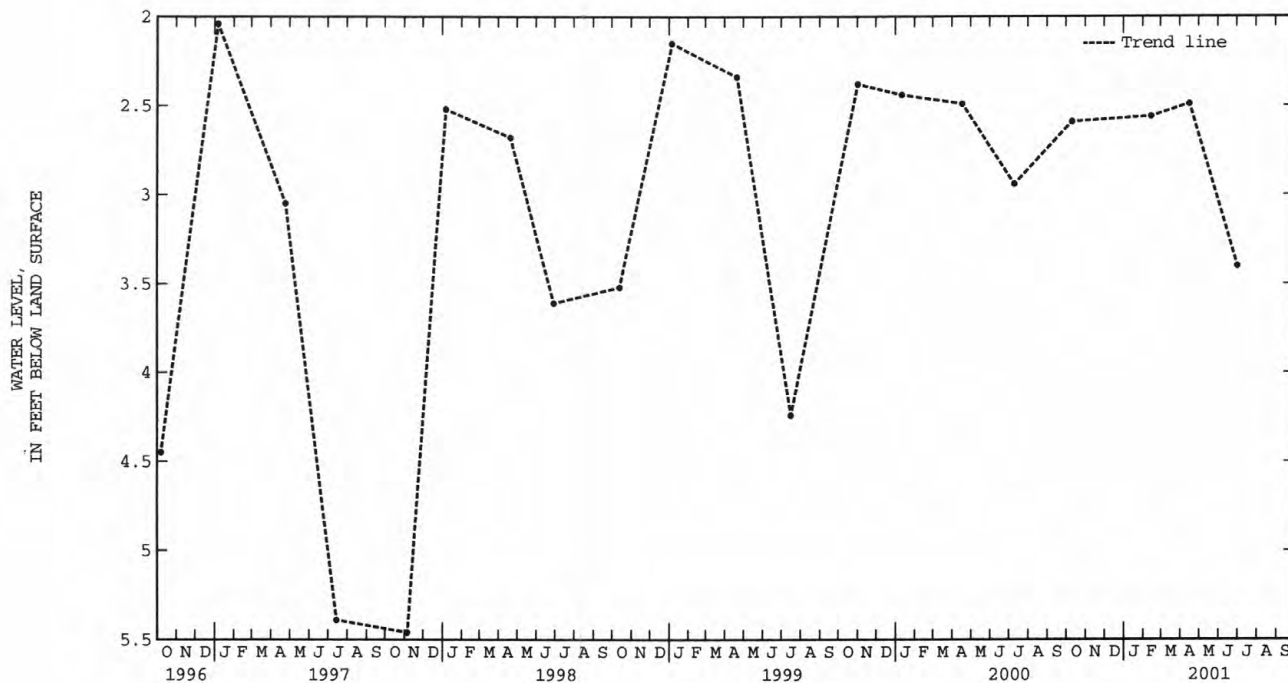
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division.

**PERIOD OF RECORD.**--June 1979 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 1.70 ft below land-surface datum, Mar. 13, 1989, Jan. 10, 1990; lowest measured, 11.76 ft below land-surface datum, Sep. 16, 1980.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 10	2.59	FEB 14	2.56	APR 16	2.49	JUL 02	3.40
WATER YEAR 2001		HIGHEST	2.49	APR 16, 2001	LOWEST	3.40	JUL 02, 2001



## GROUND-WATER LEVELS

## CITY OF VIRGINIA BEACH

364713076030701. Local number, 62C 2 SOW 092A.

**LOCATION.**--Lat 36°47'15", long 76°03'06", NAD83, Hydrologic Unit 03010205, at entrance to Oceana Naval Air Station on London Bridge Road in Virginia Beach. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Yorktown-Eastover aquifer of Miocene-Pliocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4 in., depth 102 ft, screened 97 to 102 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 10, 1985, to Jul. 5, 1995, bimonthly measurement with chalked tape. Prior to Oct. 10, 1985, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 15 ft above sea level, from topographic map. Measuring point: Top of casing, 1.08 ft above land-surface datum prior to Mar. 2, 1988; 0.7 ft thereafter.

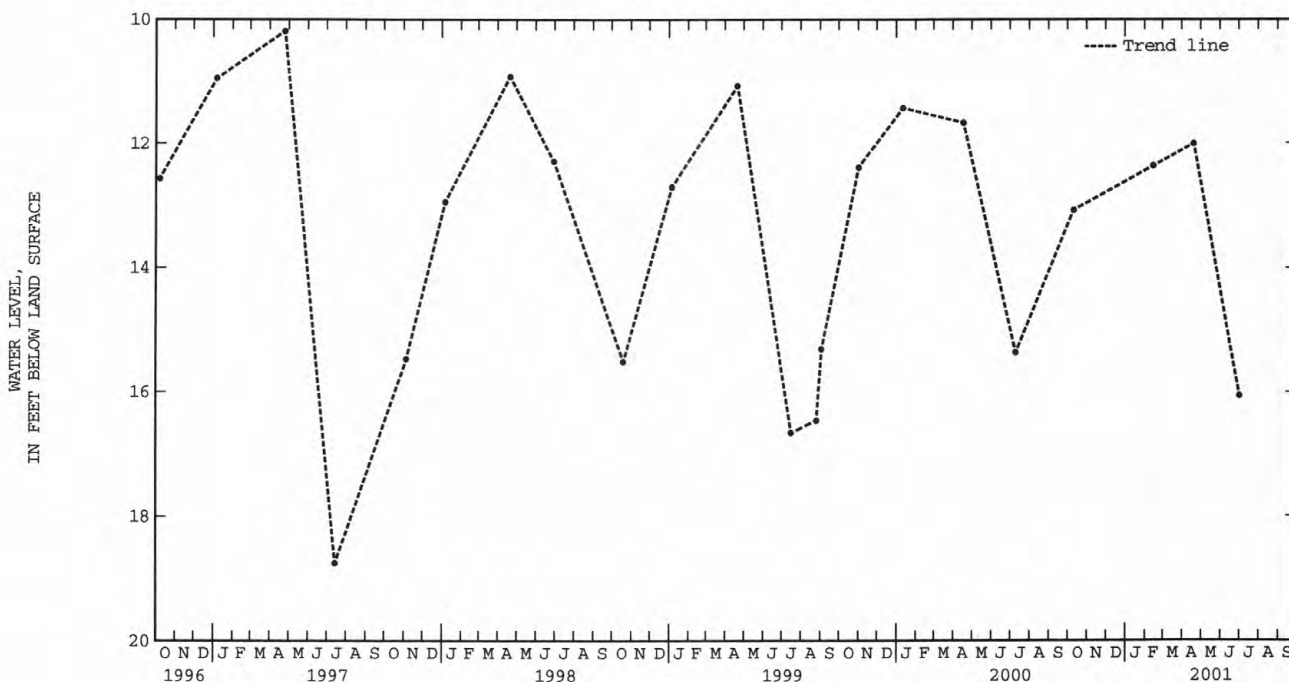
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division.

**PERIOD OF RECORD.**--December 1977 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 5.00 ft below land-surface datum, Dec. 1, 1977; lowest measured, 18.75 ft below land-surface datum, Jul. 14, 1997.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 10	13.08	FEB 14	12.37	APR 19	12.01	JUL 02	16.06
WATER YEAR 2001		HIGHEST	12.01	APR 19, 2001	LOWEST	16.06	JUL 02, 2001

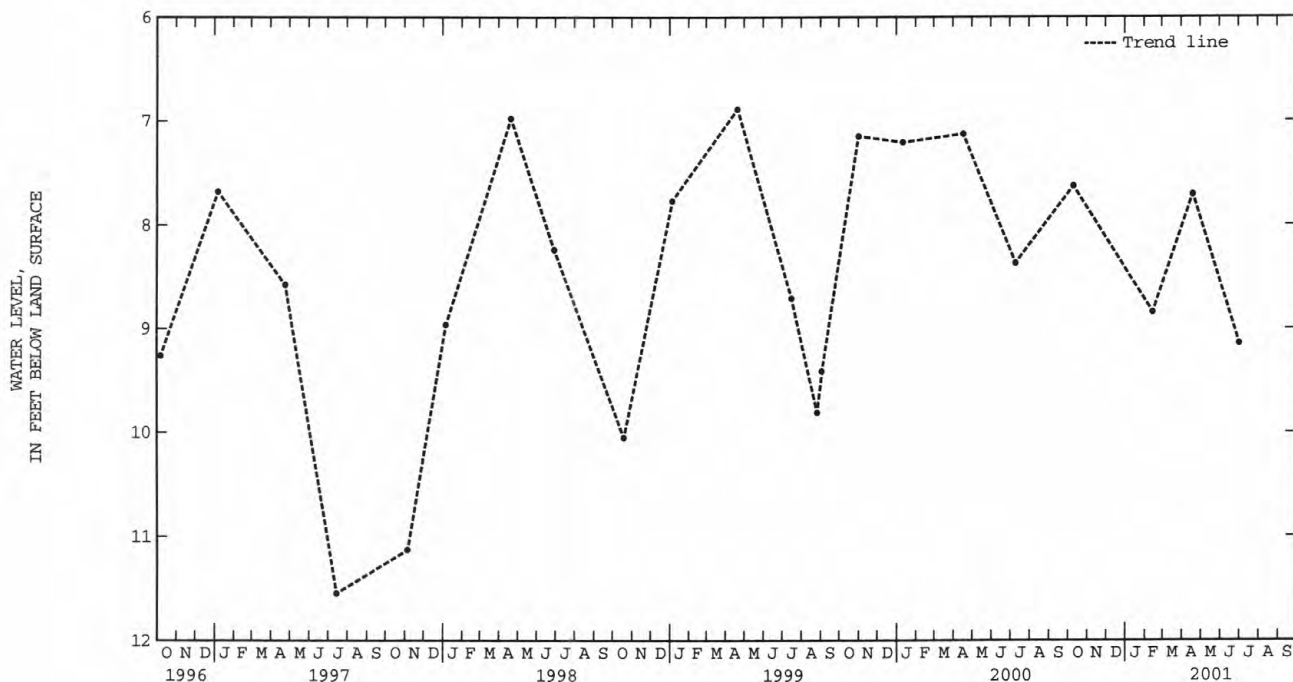


## CITY OF VIRGINIA BEACH

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 4.36 ft below land-surface datum, Feb. 16, 1983; lowest measured, 11.55 ft below land-surface datum. Jul. 14, 1997.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 10	7.63	FEB 14	8.84	APR 19	7.71	JUL 02	9.14
WATER YEAR 2001		HIGHEST	7.63	OCT 10, 2000		LOWEST	9.14 JUL 02, 2001



## GROUND-WATER LEVELS

## CITY OF VIRGINIA BEACH

364745076004302. Local number, 62C 10 SOW 172B.

**LOCATION.**--Lat 36°47'46", long 76°00'42", NAD83, Hydrologic Unit 03010205, at the end of Phantom Boulevard, 0.25 mi south of Harpers Road and Oceana Naval Air Station in Virginia Beach. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Yorktown-Eastover aquifer of Miocene-Pliocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 3 in., depth 280 ft, screened 270 to 280 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 10, 1985, to Jul. 5, 1995, bimonthly measurement with chalked tape. Prior to Oct. 10, 1985, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 17 ft above sea level, from topographic map. Measuring point: Top of casing, 2.8 ft above land-surface datum.

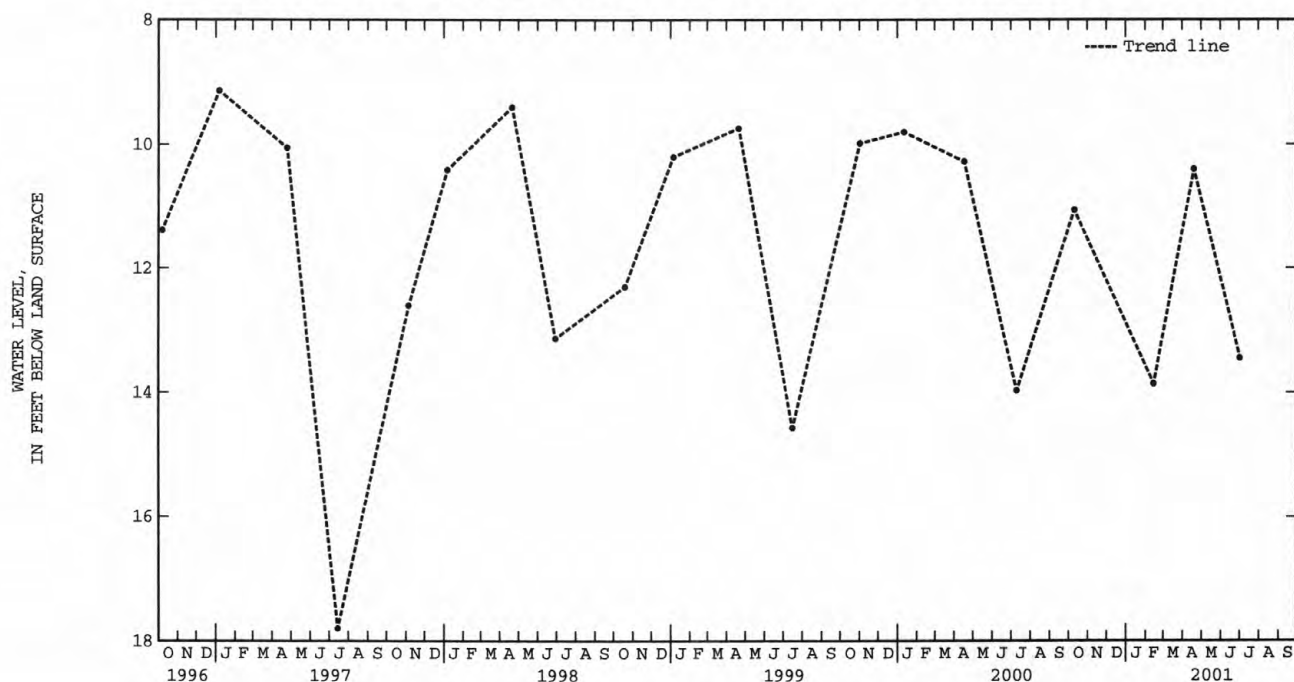
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division.

**PERIOD OF RECORD.**--April 1984 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 7.10 ft below land-surface datum, Jan. 30, 1991; lowest measured, 17.80 ft below land-surface datum, Jul. 14, 1997.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 10	11.06	FEB 14	13.86	APR 19	10.40	JUL 02	13.45
WATER YEAR 2001		HIGHEST	10.40	APR 19, 2001	LOWEST	13.86	FEB 14, 2001





## GROUND-WATER LEVELS

285

## CITY OF VIRGINIA BEACH

364745076004303. Local number, 62C 11 SOW 172C.

**LOCATION.**--Lat 36°47'47", long 76°00'42", NAD83, Hydrologic Unit 03010205, at the end of Phantom Boulevard, 0.25 mi south of Harpers Road and Oceana Naval Air Station in Virginia Beach. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Columbia aquifer of Quaternary age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 3 in., depth 35 ft, screened 20 to 30 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 10, 1985, to Jul. 5, 1995, bimonthly measurement with chalked tape. Prior to Oct. 10, 1985, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 17 ft above sea level, from topographic map. Measuring point: Top of casing, 1.7 ft above land-surface datum.

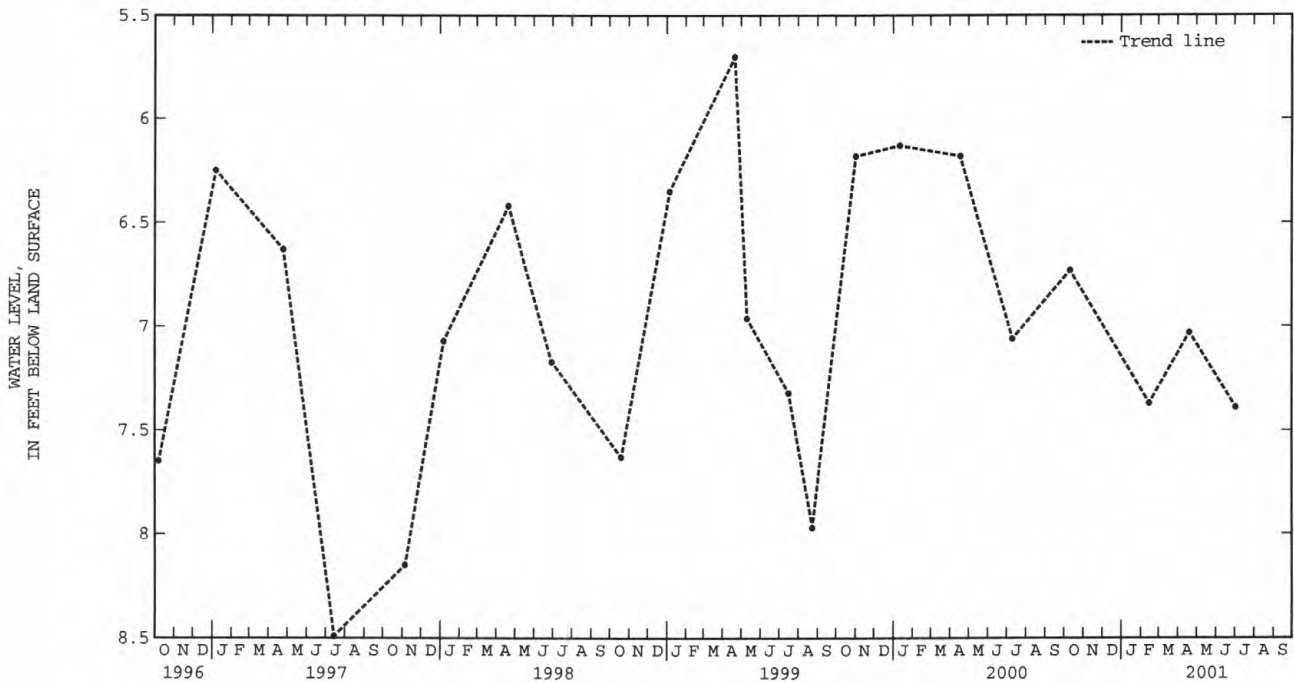
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division.

**PERIOD OF RECORD.**--May 1984 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 4.89 ft below land-surface datum, Feb. 28, 1985; lowest measured, 8.49 ft below land-surface datum, Jul. 14, 1997.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 10	6.73	FEB 14	7.37	APR 19	7.03	JUL 02	7.39
WATER YEAR 2001		HIGHEST	6.73	OCT 10, 2000	LOWEST	7.39	JUL 02, 2001



## GROUND-WATER LEVELS

## CITY OF VIRGINIA BEACH

364722075591801. Local number, 63C 4 SOW 173A.

**LOCATION.**--Lat 36°47'22", long 75°59'15", NAD83, Hydrologic Unit 02080108, at Redwing Park, 0.7 mi northeast of intersection of Oceana Boulevard and Dam Neck Road in Virginia Beach. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Yorktown-Eastover aquifer of Miocene-Pliocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 3 in., depth 291 ft, screened 281 to 291 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 10, 1985, to Jul. 5, 1995, bimonthly measurement with chalked tape. Prior to Oct. 10, 1985, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 8 ft above sea level, from topographic map. Measuring point: Top of casing, 0.8 ft above land-surface datum.

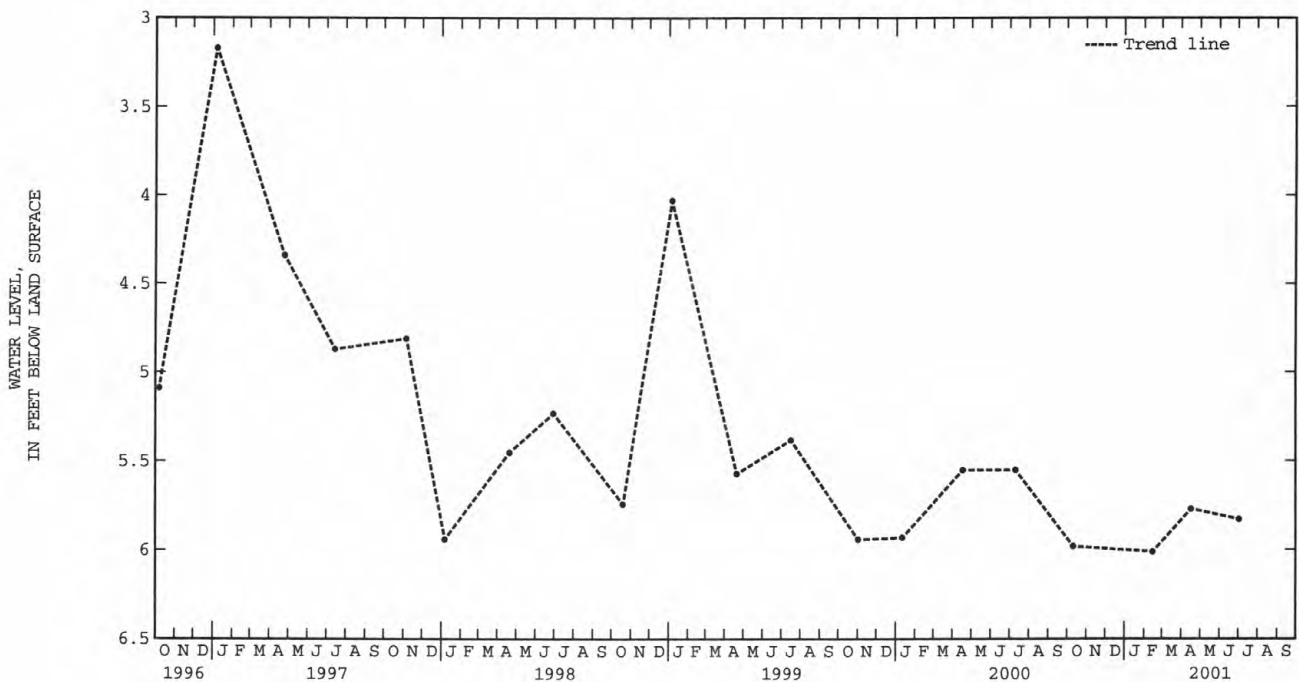
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division.

**PERIOD OF RECORD.**--April 1984 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 3.10 ft below land-surface datum, Jun. 21, 1989; lowest measured, 6.01 ft below land-surface datum, Feb. 14, 2001.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 10	5.98	FEB 14	6.01	APR 16	5.77	JUL 02	5.83
WATER YEAR 2001		HIGHEST	5.77	APR 16, 2001	LOWEST	6.01	FEB 14, 2001



## WESTMORELAND COUNTY

**LOCATION.**--Lat 38°11'10", long 76°55'04", NAD83, Hydrologic Unit 02070011, behind craft shop at George Washington Birthplace National Monument, 3.8 mi southeast of Colonial Beach. Owner: National Park Service.

**AQUIFER.**--Middle Potomac aquifer of Cretaceous age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 6 in., depth 471 ft, screened 451 to 466 ft.

**INSTRUMENTATION.**--Electronic data logger 60-minute record interval. Apr. 24, 1979 to Nov. 2, 1999, digital recorder 60-minute punch. Prior to Apr. 24, 1979, continuous strip-chart recorder.

**DATUM.**--Elevation of land-surface datum is 24 ft above sea level, from topographic map. Measuring point: Top of recorder shelf, 3.0 ft above land-surface datum.

REMARKS.--Missing record due to recorder malfunction. Water level affected by local pumpage and regional drawdown.

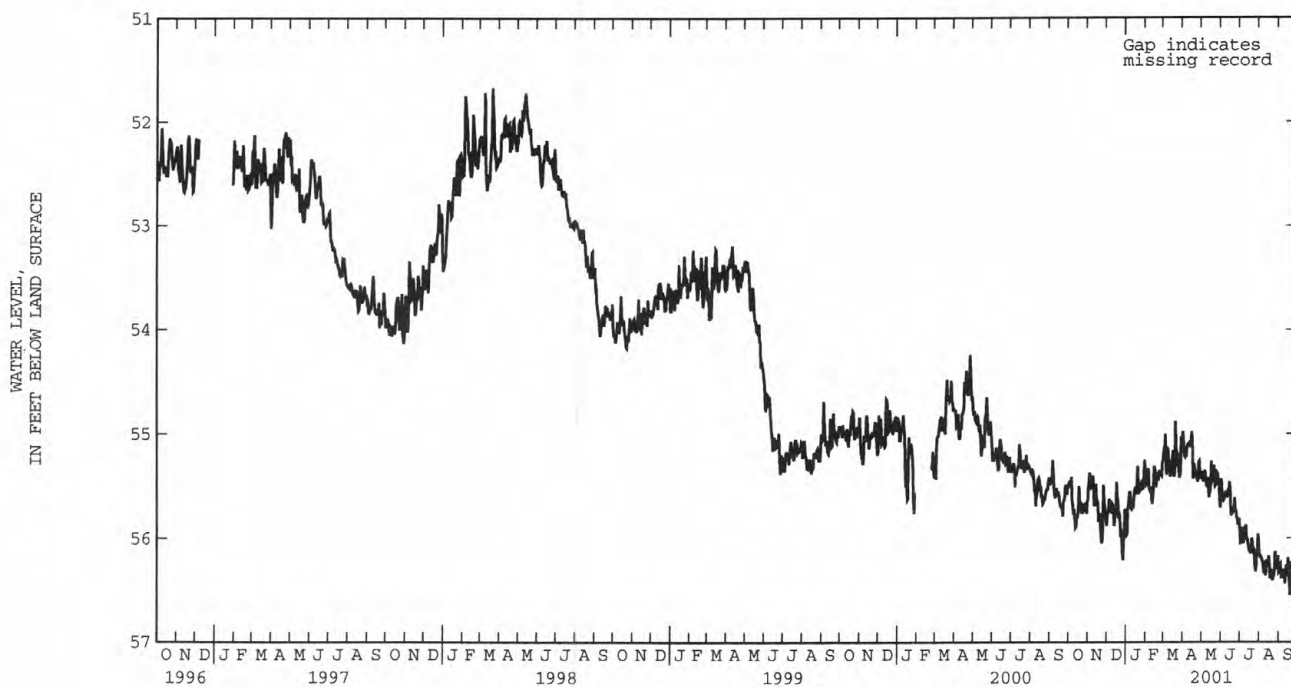
PERIOD OF RECORD.--June 1974 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 25.05 ft below land-surface datum, Jun. 24, 1974; lowest recorded, 56.55 ft below land-surface datum, Sep. 19, 2001.

**EXTREMES FOR CURRENT YEAR.**--Highest instantaneous water level, 54.33 ft below land-surface datum, Mar. 21; lowest instantaneous water level, 56.55 ft below land-surface datum, Sep. 19.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	55.50	55.51	55.62	55.69	55.33	55.00	55.22	55.45	55.64	55.92	56.20	56.38
10	55.72	55.45	55.67	55.72	55.51	55.25	55.12	55.51	55.59	55.91	56.22	56.35
15	55.80	55.63	55.77	55.54	55.31	55.29	55.07	55.55	55.46	56.10	56.25	56.30
20	55.66	55.76	55.81	55.31	55.40	55.33	55.31	55.44	55.75	56.00	56.30	56.41
25	55.74	55.88	56.02	55.52	55.38	55.30	55.46	55.46	55.74	56.26	56.32	56.21
EOM	55.65	55.81	55.76	55.25	55.28	55.06	55.41	55.71	55.81	56.01	56.17	56.25



## GROUND-WATER LEVELS

## WESTMORELAND COUNTY

381132076551001. Local number, 55P 9.

**LOCATION.**--Lat 38°11'32", long 76°55'09", NAD83, Hydrologic Unit 02070011, at George Washington Birthplace National Monument, 500 ft east of park road, 0.6 mi north of the end of State Highway 204, and 3.4 mi southeast of Colonial Beach. Owner: National Park Service.

**AQUIFER.**--Columbia aquifer of Quaternary age.

**WELL CHARACTERISTICS.**--Dug unused water well, diameter 36 in., depth 22.6 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by USGS personnel.

**DATUM.**--Elevation of land-surface datum is 17 ft above sea level, from topographic map. Measuring point: Top of concrete hatch on well casing, 2.25 ft above land-surface datum. Prior to Jul. 3, 1995, top of concrete lip on casing, 1.65 ft above land-surface datum.

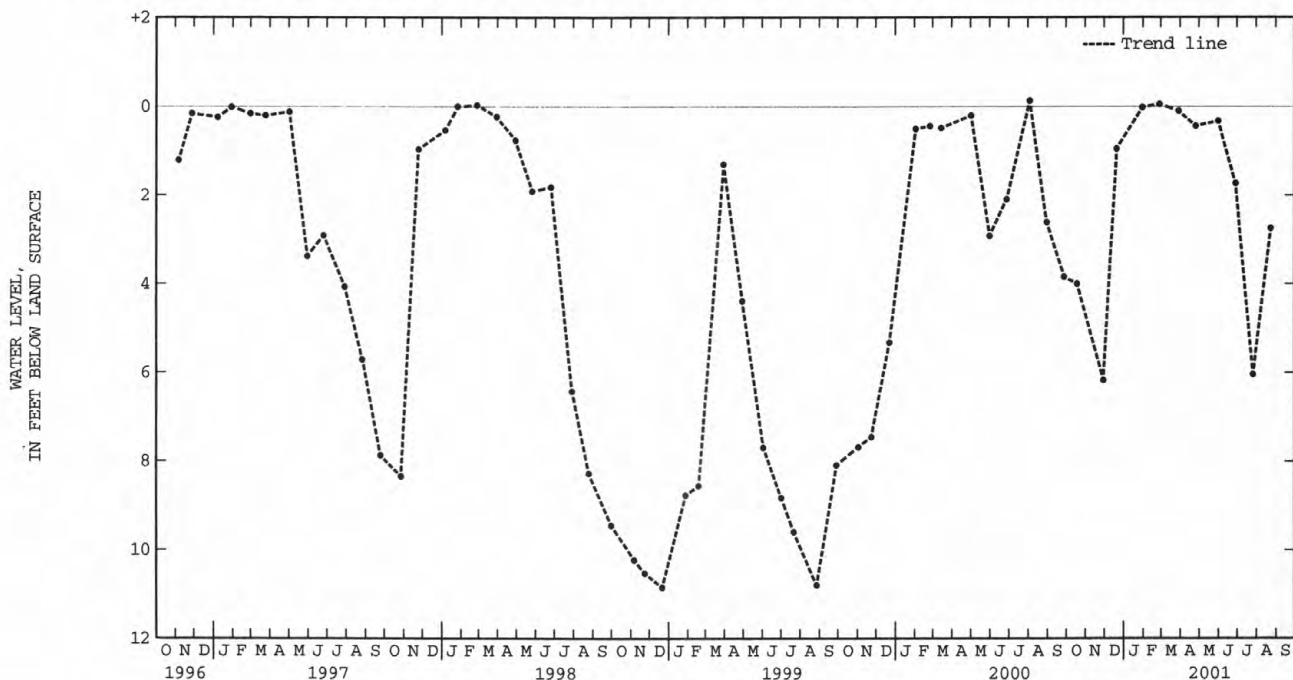
**PERIOD OF RECORD.**--July 1977 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 0.13 ft above land-surface datum, Feb. 24, 1994, Aug. 3, 2000; lowest measured, 12.80 ft below land-surface datum, Dec. 27, 1988.

**WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001**

(READINGS ABOVE LAND SURFACE INDICATED BY "+")

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 18	4.00	DEC 20	.95	FEB 26	+.05	APR 25	.44	JUN 28	1.73	AUG 23	2.75
NOV 29	6.17	JAN 30	.02	MAR 29	.10	MAY 31	.32	JUL 26	6.04		
WATER YEAR 2001		HIGHEST	+.05	FEB 26, 2001	LOWEST	6.17	NOV 29, 2000				



## GROUND-WATER LEVELS

289

## WESTMORELAND COUNTY

380538076490801. Local number, 56N 1 SOW 016.

**LOCATION.**--Lat 38°05'38", long 76°49'07", NAD83, Hydrologic Unit 02080104, at Washington and Lee School, 0.5 mi east of Montross. Owner: Westmoreland County Public Schools.

**AQUIFER.**--Brightseat-upper Potomac aquifer of Cretaceous-Paleocene age.

**WELL CHARACTERISTICS.**--Drilled unused water well, diameter 4 in. to 189 ft, diameter 2 in. from 189 to 641 ft, depth 641 ft, screened 608 to 628 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 3, 1985, to Jul. 11, 1995, bimonthly measurement with chalked tape. Mar. 31, 1979, to Oct. 2, 1985, occasional measurement with chalked tape. Prior to Mar. 31, 1979, continuous strip-chart recorder.

**DATUM.**--Elevation of land-surface datum is 149 ft above sea level, from topographic map. Measuring point: Top of casing, 1.0 ft above land-surface datum.

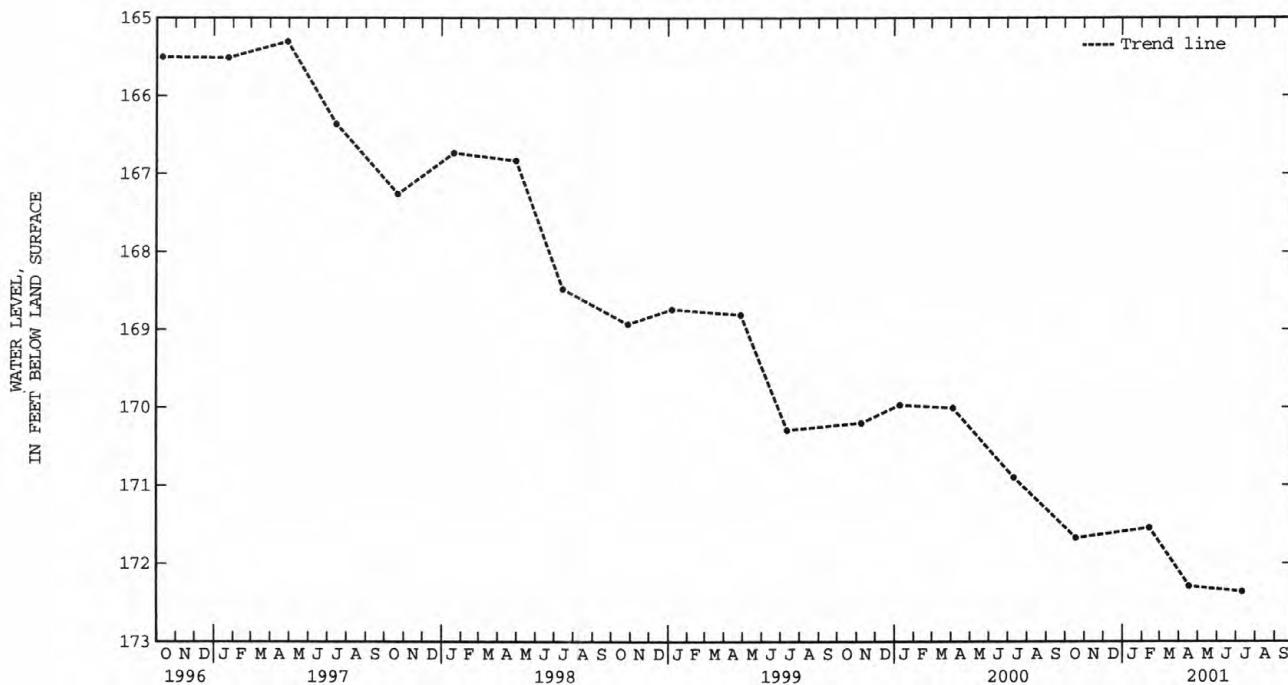
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

**PERIOD OF RECORD.**--August 1967 to current year.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level recorded, 133.47 ft below land-surface datum, Aug. 28, 1967; lowest measured, 172.36 ft below land-surface datum, Jul. 11, 2001.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 18	171.67	FEB 13	171.54	APR 17	172.29	JUL 11	172.36
WATER YEAR 2001		HIGHEST 171.54		FEB 13, 2001		LOWEST 172.36 JUL 11, 2001	



## GROUND-WATER LEVELS

## YORK COUNTY

371654076401601. Local number, 57G 17 SOW 068.

**LOCATION.**--Lat 37°16'55", long 76°40'15", NAD83, Hydrologic Unit 02080107, 250 ft east of State Highway 716 at Parkway Estates, 0.5 mi east of Williamsburg. Owner: Sydnor Hydrodynamics.

**AQUIFER.**--Brightseat-upper Potomac aquifer of Cretaceous-Paleocene age and Aquia aquifer of Paleocene age.

**WELL CHARACTERISTICS.**--Drilled unused water well, diameter 8 in., depth 452.3 ft, screened 411 to 426 ft, 442.2 to 452.3 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to Jul. 7, 1995, bimonthly measurement with chalked tape. Apr. 30, 1978, to Sept. 30, 1985, occasional measurement with chalked tape. Jan. 15, 1974, to Apr. 30, 1978, continuous strip-chart recorder. Prior to Jan. 15, 1974, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 60 ft above sea level, from topographic map. Measuring point: Top of casing, 0.85 ft above land-surface datum.

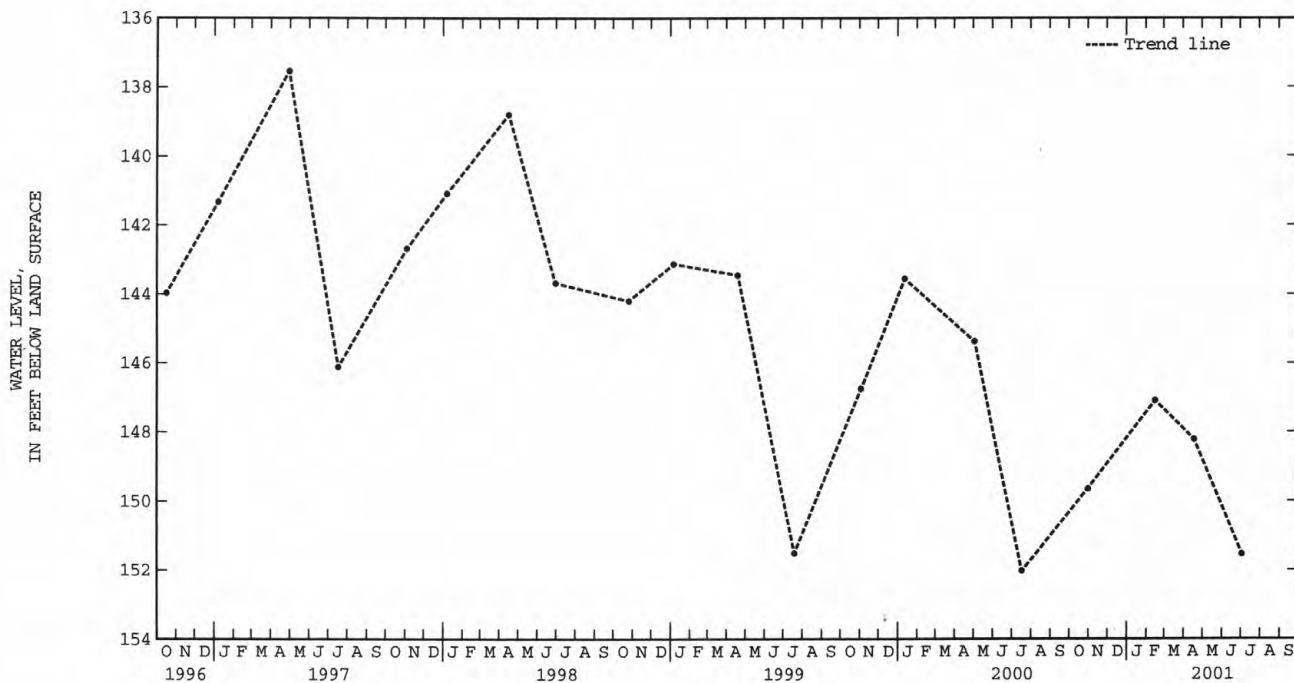
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Water from this well is known to contain concentrations of dissolved solids greater than 1,000 mg/L. Water level affected by regional drawdown.

**PERIOD OF RECORD.**--November 1972 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 106.09 ft below land-surface datum, Nov. 22, 1972; lowest measured, 152.03 ft below land-surface datum, Jul. 17, 2000.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31	149.65	FEB 15	147.10	APR 18	148.23	JUL 03	151.54
WATER YEAR 2001		HIGHEST	147.10	FEB 15, 2001		LOWEST	151.54 JUL 03, 2001





## GROUND-WATER LEVELS

291

## YORK COUNTY

371045076310702. Local number, 58F 62 SOW 187A.

**LOCATION.**--Lat 37°10'46", long 76°31'06", NAD83, Hydrologic Unit 02080206, 300 ft north of State Highway 105, 1.8 mi east of intersection of State Highways 105 and 143, and 3.1 mi southeast of Lee Hall. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Eastover-Calvert confining unit of Miocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4.5 in., depth 140 ft, screened 120 to 140 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sep. 4, 1991, to Jul. 10, 1995, bimonthly measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to Sep. 4, 1991, occasional measurement with chalked tape by USGS and Virginia Department of Environmental Quality - Water Division personnel.

**DATUM.**--Elevation of land-surface datum is 55 ft above sea level, from topographic map. Measuring point: Top of casing, 1.5 ft above land-surface datum.

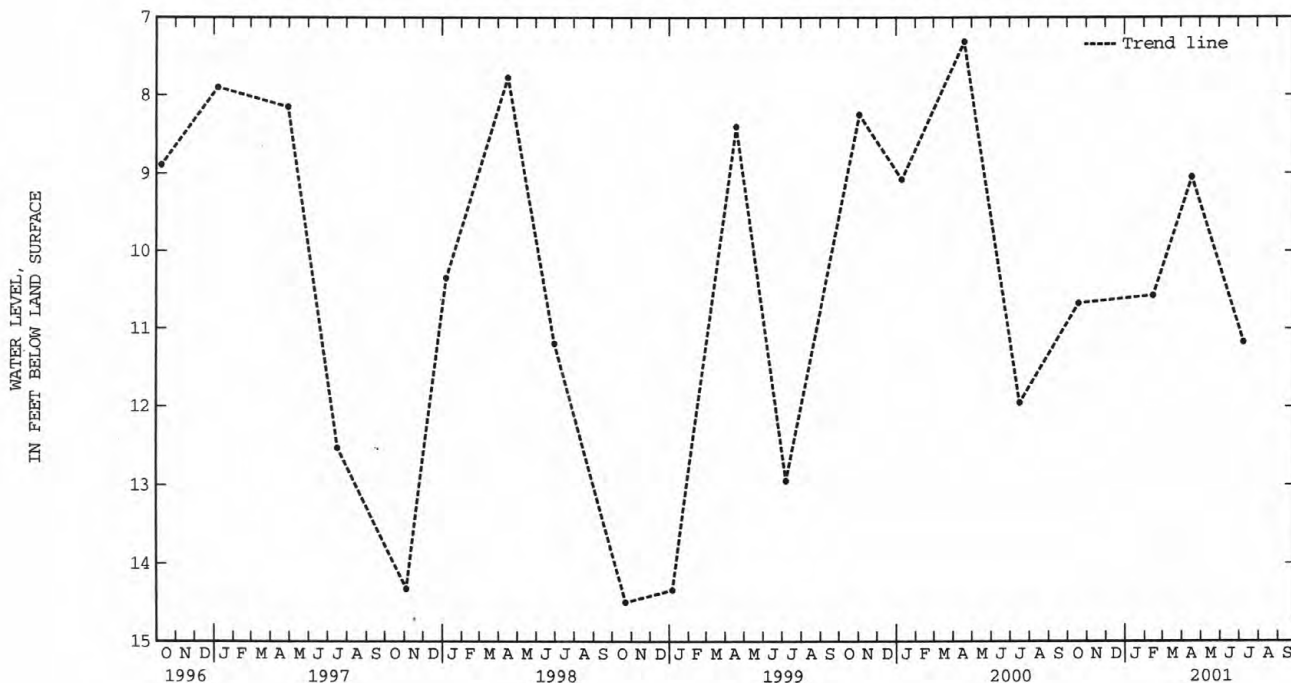
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division.

**PERIOD OF RECORD.**--September 1990 to current year. Unpublished records available in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 7.08 ft below land-surface datum, Apr. 6, 1994; lowest measured, 14.83 ft below land-surface datum, Nov. 6, 1991.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 19	10.67	FEB 15	10.57	APR 18	9.05	JUL 09	11.17
WATER YEAR 2001		HIGHEST		9.05 APR 18, 2001		LOWEST	
						11.17 JUL 09, 2001	



## GROUND-WATER LEVELS

## YORK COUNTY

371045076310703. Local number, 58F 63 SOW 187B.

**LOCATION.**--Lat 37°10'46", long 76°31'06", NAD83, Hydrologic Unit 02080206, 300 ft north of State Highway 105, 1.8 mi east of intersection of State Highways 105 and 143, and 3.1 mi southeast of Lee Hall. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Cornwallis Cave aquifer of Pliocene-Holocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4.5 in., depth 28 ft, screened 18 to 28 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sep. 4, 1991, to Jul. 10, 1995, bimonthly measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to Sep. 4, 1991, occasional measurement with chalked tape by USGS and Virginia Department of Environmental Quality - Water Division personnel.

**DATUM.**--Elevation of land-surface datum is 55 ft above sea level, from topographic map. Measuring point: Top of casing, 1.6 ft above land-surface datum.

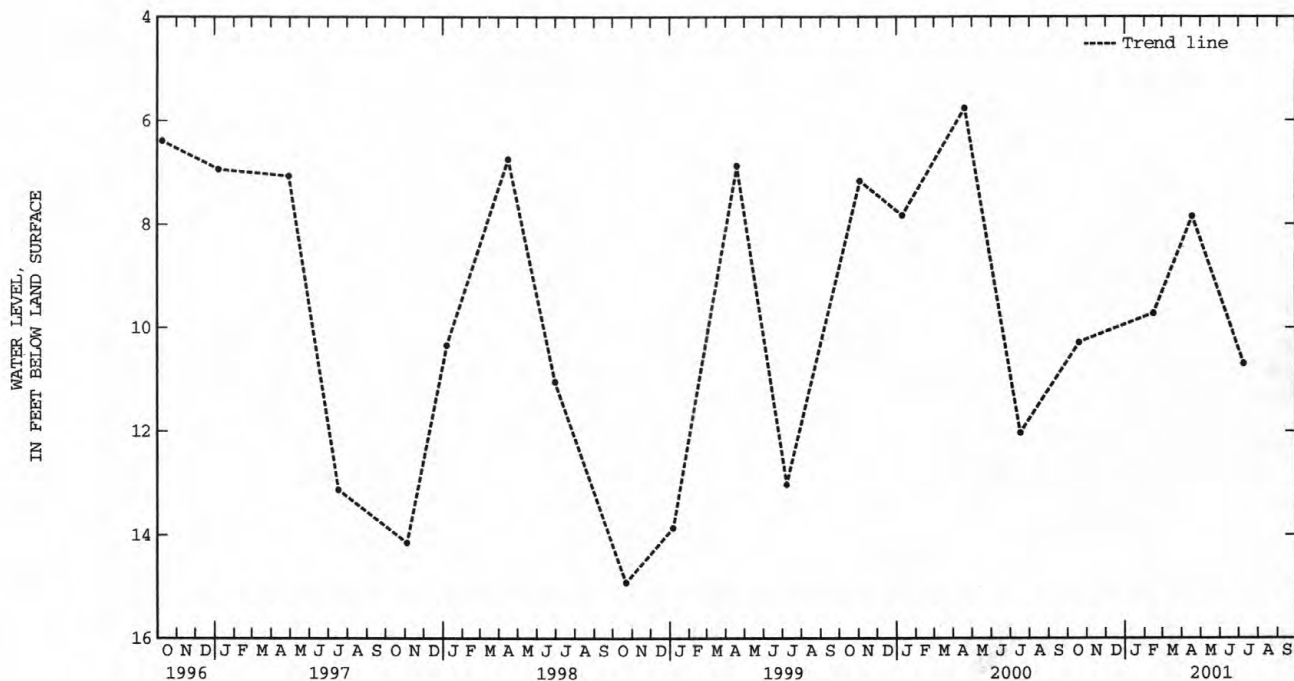
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division.

**PERIOD OF RECORD.**--September 1990 to current year. Unpublished records available in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 5.76 ft below land-surface datum, Apr. 19, 2000; lowest measured, 14.95 ft below land-surface datum, Jan. 18, 1996.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 19	10.28	FEB 15	9.72	APR 18	7.85	JUL 09	10.69
WATER YEAR 2001		HIGHEST	7.85	APR 18, 2001	LOWEST	10.69	JUL 09, 2001



## GROUND-WATER LEVELS

293

## YORK COUNTY

371250076300502. Local number, 58F 65 SOW 191A.

**LOCATION.**--Lat 37°12'51", long 76°30'04", NAD83, Hydrologic Unit 02080107, 300 ft east of State Highway 704, 1.2 mi north of intersection of State Highway 704 and U.S. Highway 17, and 1.5 mi south of Yorktown. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Yorktown-Eastover aquifer of Miocene-Pliocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4.5 in., depth 110 ft, screened 90 to 110 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. May 7, 1991 to Oct. 17, 1995, continuous strip-chart recorder since May 7, 1991. Occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 55 ft above sea level, from topographic map. Measuring point: Top of casing, 1.8 ft above land-surface datum prior to May 7, 1991; 1.70 ft thereafter.

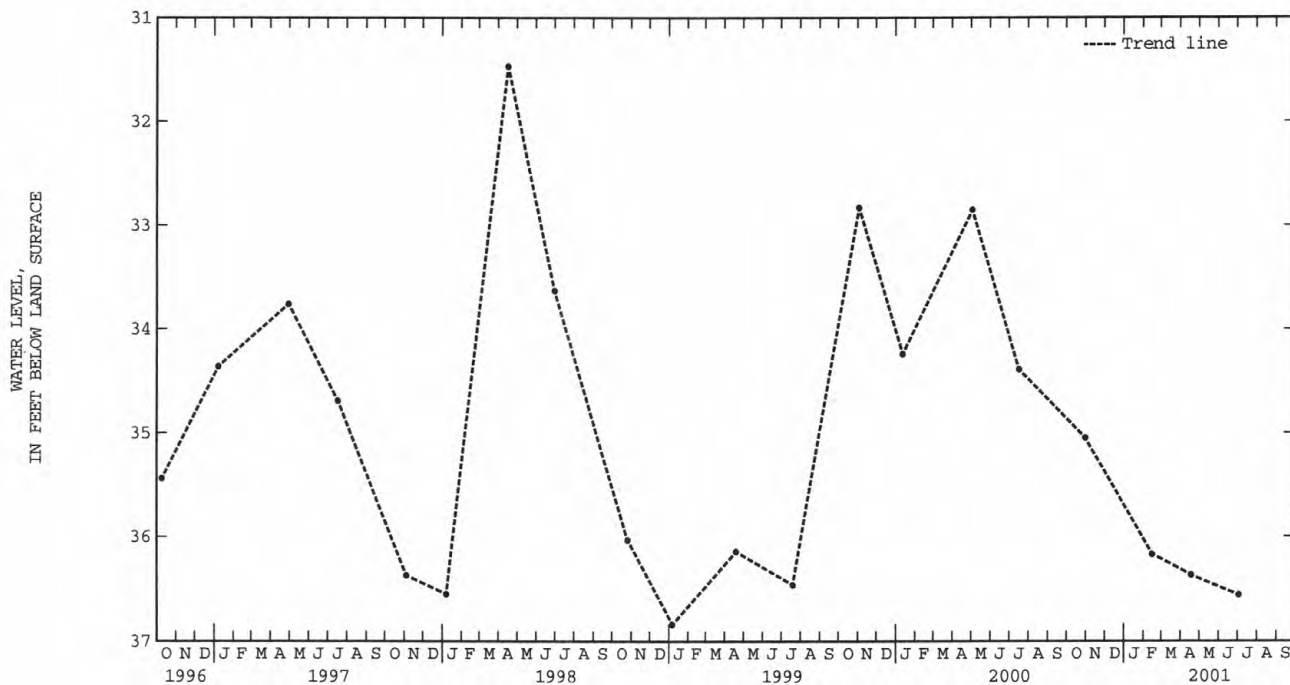
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division.

**PERIOD OF RECORD.**--November 1990 to current year. Unpublished records available in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 31.47 ft below land-surface datum, Apr. 16, 1998; lowest recorded, 38.38 ft below land-surface datum, Mar. 13, 1992.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31	35.05	FEB 15	36.17	APR 18	36.37	JUL 03	36.56
WATER YEAR 2001		HIGHEST	35.05	OCT 31, 2000	LOWEST	36.56	JUL 03, 2001



## GROUND-WATER LEVELS

## YORK COUNTY

371535076373501. Local number, 59F 1 SOW 027.

**LOCATION.**--Lat 37°13'05", long 76°29'18", NAD83, Hydrologic Unit 02080107, at U.S. Naval Supply Center, 1.6 mi southeast of Yorktown. Owner: U.S. Naval Supply Center.

**AQUIFER.**--Chickahominy-Piney Point aquifer of Eocene-Oligocene age.

**WELL CHARACTERISTICS.**--Drilled unused water well, diameter 10 in., depth 446 ft, screened 421 to 446 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 11, 1985, to Jul. 7, 1995, bimonthly measurement with chalked tape. Sep. 10, 1971, to Oct. 10, 1985, occasional measurement with chalked tape. Apr. 10, 1970, to Sep. 10, 1971, continuous strip-chart recorder. Prior to Apr. 10, 1970, occasional measurement with chalked tape.

**DATUM.**--Elevation of land-surface datum is 50 ft above sea level, from topographic map. Measuring point: Top of casing, 2.8 ft above land-surface datum.

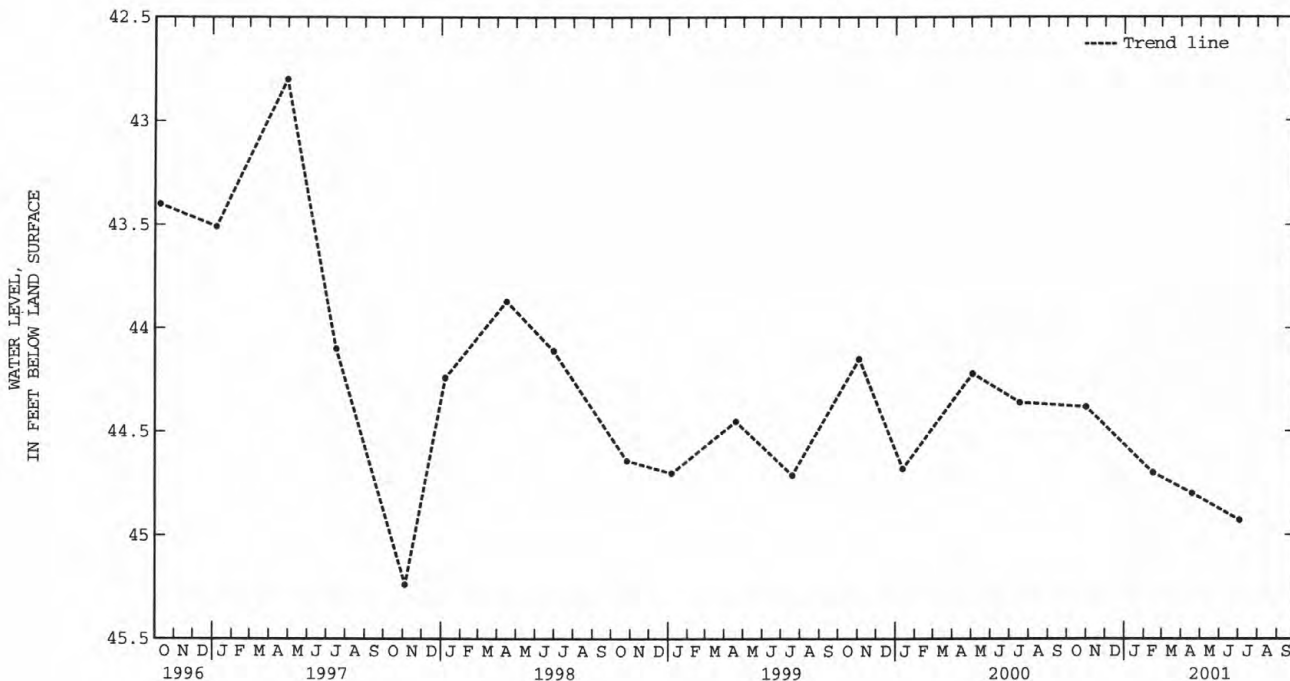
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Water from this well is known to contain concentrations of dissolved solids greater than 1,000 mg/L.

**PERIOD OF RECORD.**--October 1969 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 40.00 ft below land-surface datum, Oct. 27, 1969; lowest measured, 45.24 ft below land-surface datum, Nov. 4, 1997.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31	44.38	FEB 15	44.70	APR 18	44.80	JUL 03	44.93
WATER YEAR 2001 HIGHEST 44.38		OCT 31, 2000		LOWEST 44.93		JUL 03, 2001	



## GROUND-WATER LEVELS

295

## YORK COUNTY

370841076275202. Local number, 59F 72 SOW 184A

**LOCATION.**--Lat 37°08'42", long 76°27'51", NAD83, Hydrologic Unit 02080108, 800 ft south of State Highway 620, 0.4 mi southwest of intersection of State Highway 620 and U.S. Highway 17, and 2.2 mi southwest of Dare. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Yorktown-Eastover aquifer of Miocene-Pliocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4.5 in. to 98 ft, diameter 3.5 in. from 98 to 131 ft, depth 131 ft, screened 121 to 131 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sep. 12, 1991, to Jul. 7, 1995, bimonthly measurement with chalked tape. Prior to Sep. 12, 1991, digital recorder 60-minute punch.

**DATUM.**--Elevation of land-surface datum is 42 ft above sea level, from topographic map. Measuring point: Top of recorder shelf, 2.8 ft above land-surface datum prior to Nov. 6, 1991; top of casing, 1.80 ft thereafter.

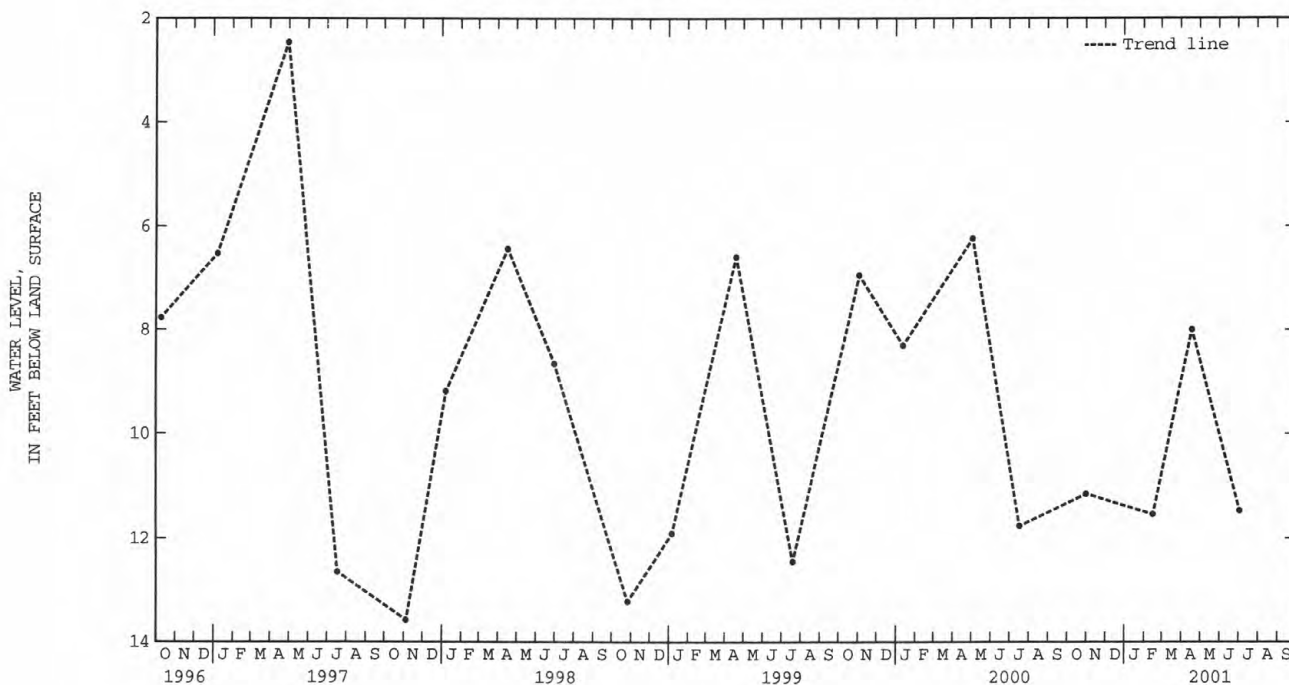
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division.

**PERIOD OF RECORD.**--July 1990 to current year. Unpublished records available in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level recorded, 2.46 ft below land-surface datum, Apr. 29, 1997; lowest recorded, 13.99 ft below land-surface datum, Nov. 27, 30, Dec. 1, 1990.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31	11.15	FEB 15	11.54	APR 18	8.00	JUL 03	11.47
WATER YEAR 2001		HIGHEST	8.00	APR 18, 2001	LOWEST	11.54	FEB 15, 2001



## GROUND-WATER LEVELS

## YORK COUNTY

370841076275203. Local number, 59F 73 SOW 184B.

**LOCATION.**--Lat 37°08'42", long 76°27'51", NAD83, Hydrologic Unit 02080108, 800 ft south of State Highway 620, 0.4 mi southwest of intersection of State Highway 620 and U.S. Highway 17, and 2.2 mi southwest of Dare. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Cornwallis Cave aquifer of Pliocene-Holocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4.5 in. to 39 ft, diameter 2.0 in. from 39 to 60 ft, depth 60 ft, screened 50 to 60 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sep. 4, 1991, to Jul. 7, 1995, bimonthly measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to Sep. 4, 1991, occasional measurement with chalked tape by USGS and Virginia Department of Environmental Quality - Water Division personnel.

**DATUM.**--Elevation of land-surface datum is 42 ft above sea level, from topographic map. Measuring point: Top of casing, 1.7 ft above land-surface datum.

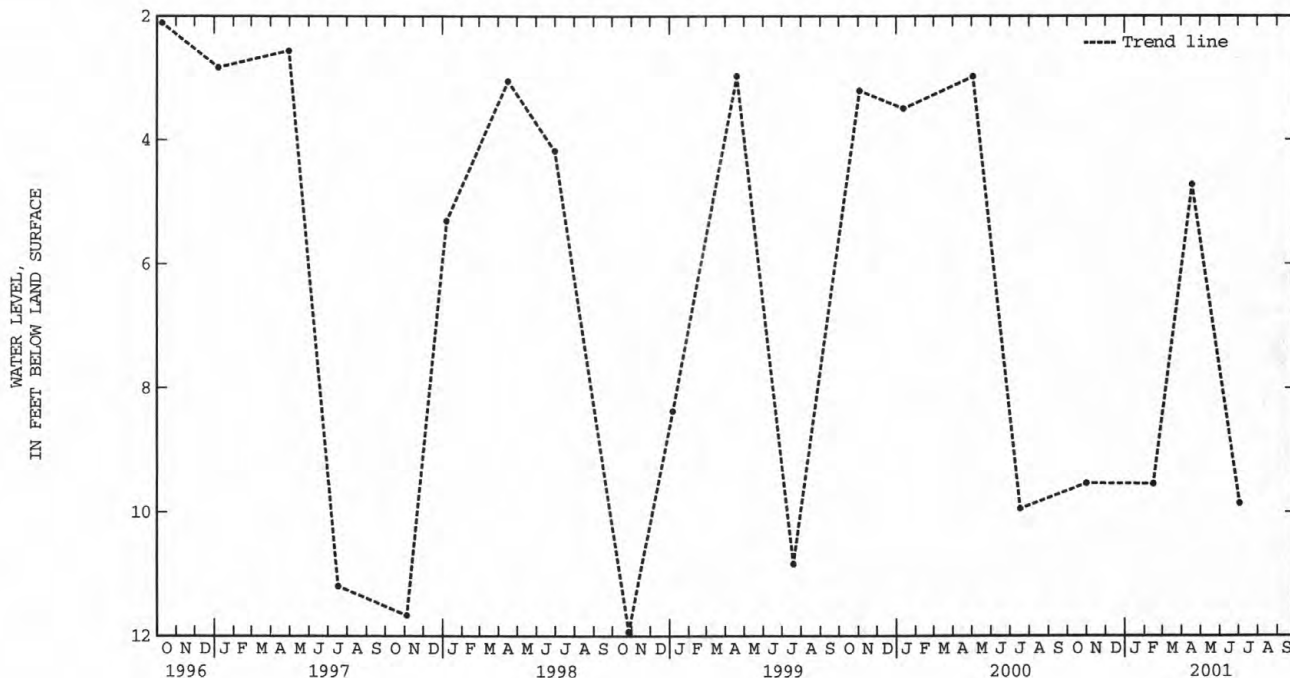
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division.

**PERIOD OF RECORD.**--July 1990 to current year. Unpublished records available in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 2.03 ft below land-surface datum, Feb. 15, 1994; lowest measured, 12.81 ft below land-surface datum, Nov. 2, 1994.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31	9.53	FEB 15	9.54	APR 18	4.73	JUL 03	9.86
WATER YEAR 2001		HIGHEST	4.73	APR 18, 2001	LOWEST	9.86	JUL 03, 2001





## GROUND-WATER LEVELS

297

## YORK COUNTY

370841076275204. Local number, 59F 74 SOW 184C.

**LOCATION.**--Lat 37°08'42", long 76°27'51", NAD83, Hydrologic Unit 02080108, 800 ft south of State Highway 620, 0.4 mi southwest of intersection of State Highway 620 and U.S. Highway 17, and 2.2 mi southwest of Dare. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Columbia aquifer of Quaternary age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4.5 in., depth 20 ft, screened 10 to 20 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sep. 12, 1991, to Jul. 7, 1995, bimonthly measurement with chalked tape. Prior to Sep. 12, 1991, digital recorder 60-minute punch.

**DATUM.**--Elevation of land-surface datum is 42 ft above sea level, from topographic map. Measuring point: Top of recorder shelf, 2.8 ft above land-surface datum prior to Nov. 6, 1991; top of casing, 1.80 ft thereafter.

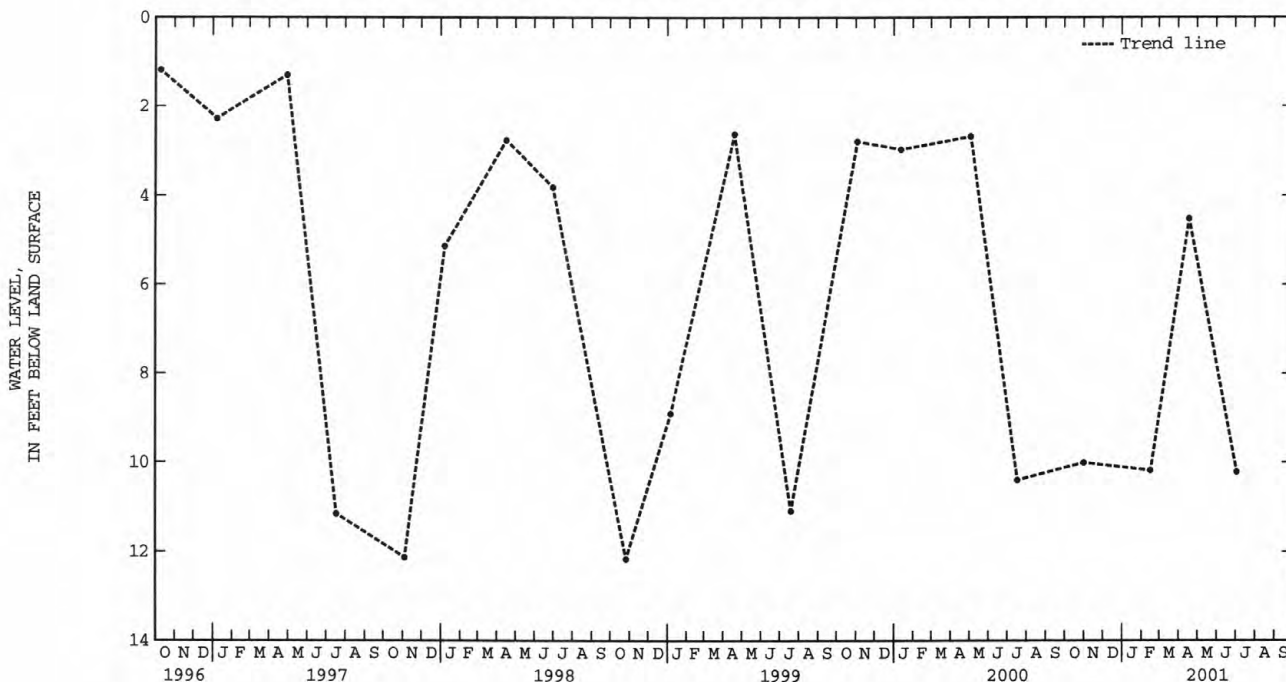
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division.

**PERIOD OF RECORD.**--July 1990 to current year. Unpublished records available in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level recorded, 1.19 ft below land-surface datum, Oct. 9, 1996; lowest recorded, 13.20 ft below land-surface datum, Dec. 14, 15, 20, 1990.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31	10.01	FEB 15	10.18	APR 18	4.52	JUL 03	10.22
WATER YEAR 2001		HIGHEST	4.52	APR 18, 2001		LOWEST	10.22 JUL 03, 2001



## GROUND-WATER LEVELS

## YORK COUNTY

370958076291502. Local number, 59F 81 SOW 186A.

**LOCATION.**--Lat 37°09'59", long 76°29'14", NAD83, Hydrologic Unit 02080108, 100 ft south of State Highway 173, 0.8 mi southwest of intersection of U.S. Highway 17 and State Highway 173, and 2.8 mi west of Dare. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Yorktown-Eastover aquifer of Miocene-Pliocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4.5 in., depth 132 ft, screened 112 to 132 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sep. 4, 1991, to Jul. 7, 1995, bimonthly measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to Sep. 4, 1991, occasional measurement with chalked tape by USGS and Virginia Department of Environmental Quality - Water Division personnel.

**DATUM.**--Elevation of land-surface datum is 50.77 ft above sea level. Measuring point: Top of casing, 1.6 ft above land-surface datum.

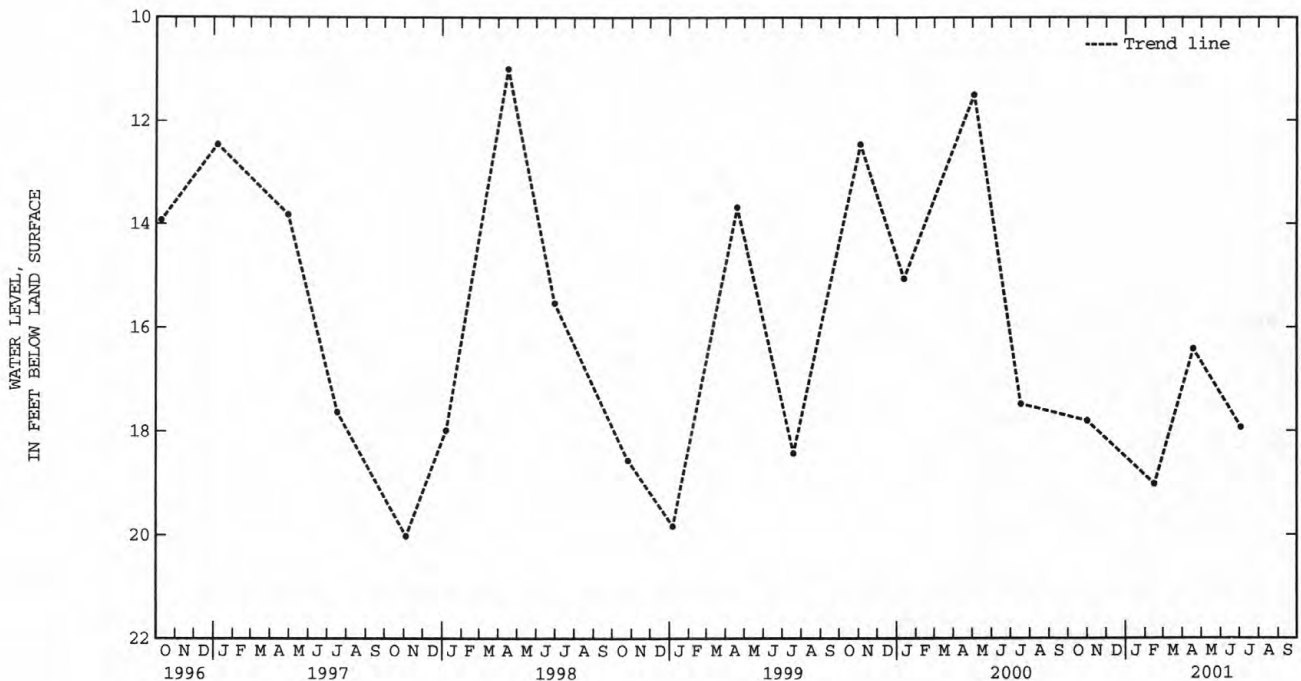
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division.

**PERIOD OF RECORD.**--September 1990 to current year. Unpublished records available in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 10.73 ft below land-surface datum, Apr. 6, 1994; lowest measured, 21.55 ft below land-surface datum, Jan. 8, 1992.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31	17.80	FEB 15	19.02	APR 18	16.41	JUL 03	17.93
WATER YEAR 2001		HIGHEST	16.41	APR 18, 2001	LOWEST	19.02	FEB 15, 2001



## GROUND-WATER LEVELS

299

## YORK COUNTY

371207076265502. Local number, 59F 86 SOW 188A.

**LOCATION.**--Lat 37°12'08", long 76°26'54", NAD83, Hydrologic Unit 02080107, 200 ft north of State Highway 718, 0.3 mi east of intersection of State Highways 173 and 718, and 2.3 mi northwest of Dare. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--York County shallow aquifer system (undivided) of Miocene-Holocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4.5 in., depth 99 ft, screened 79 to 99 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sep. 4, 1991, to Jul. 7, 1995, bimonthly measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to Sep. 4, 1991, occasional measurement with chalked tape by USGS and Virginia Department of Environmental Quality - Water Division personnel.

**DATUM.**--Elevation of land-surface datum is 7 ft above sea level, from topographic map. Measuring point: Top of casing, 1.6 ft above land-surface datum.

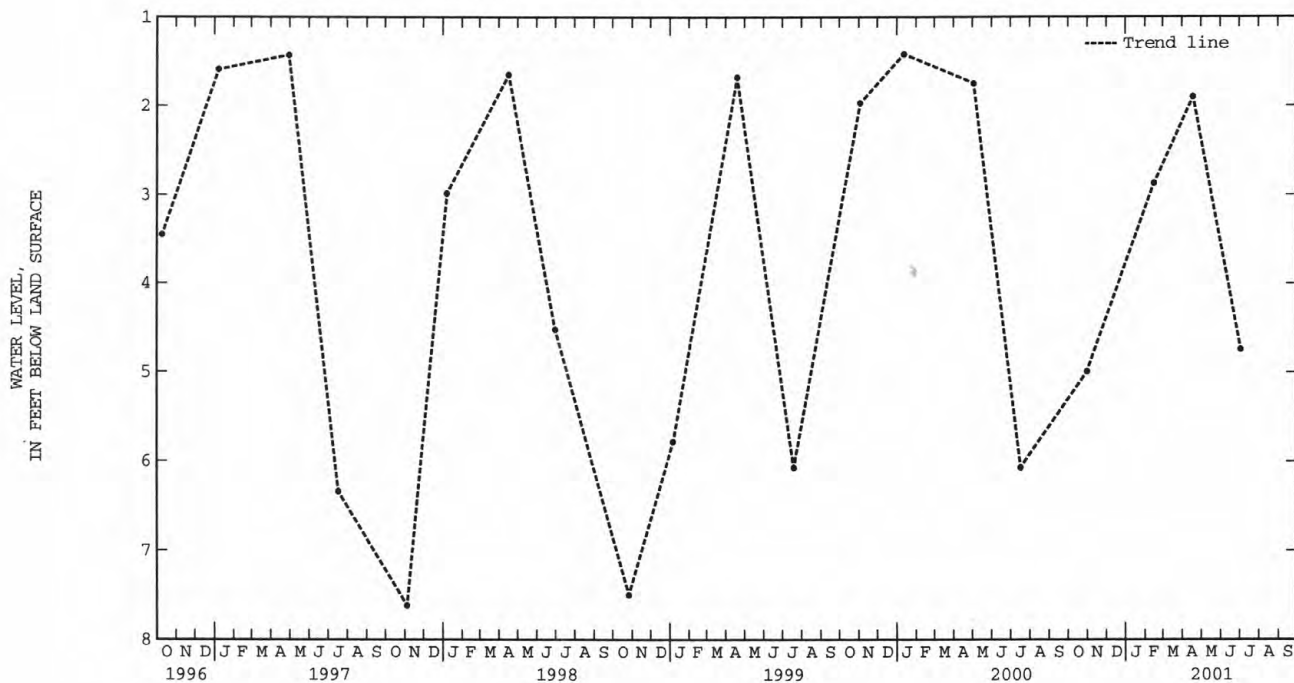
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division.

**PERIOD OF RECORD.**--September 1990 to current year. Unpublished records available in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 1.37 ft below land-surface datum, Feb. 15, 1994; lowest measured, 7.73 ft below land-surface datum, Oct. 14, 1993.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31	4.99	FEB 15	2.87	APR 18	1.90	JUL 03	4.74
WATER YEAR 2001		HIGHEST	1.90	APR 18, 2001		LOWEST	4.99 OCT 31, 2000



## GROUND-WATER LEVELS

## YORK COUNTY

371053076252202. Local number, 59F 89 SOW 189A.

**LOCATION.**--Lat 37°10'54", long 76°25'21", NAD83, Hydrologic Unit 02080108, 500 ft north of State Highway 617, 0.6 mi northeast of intersection of State Highways 620 and 617, and 1.3 mi northeast of Dare. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Yorktown-Eastover aquifer of Miocene-Pliocene age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4.5 in., depth 97 ft, screened 77 to 97 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sep. 4, 1991, to Jul. 7, 1995, bimonthly measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to Sep. 4, 1991, occasional measurement with chalked tape by USGS and Virginia Department of Environmental Quality - Water Division personnel.

**DATUM.**--Elevation of land-surface datum is 4.63 ft above sea level. Measuring point: Top of casing, 1.5 ft above land-surface datum.

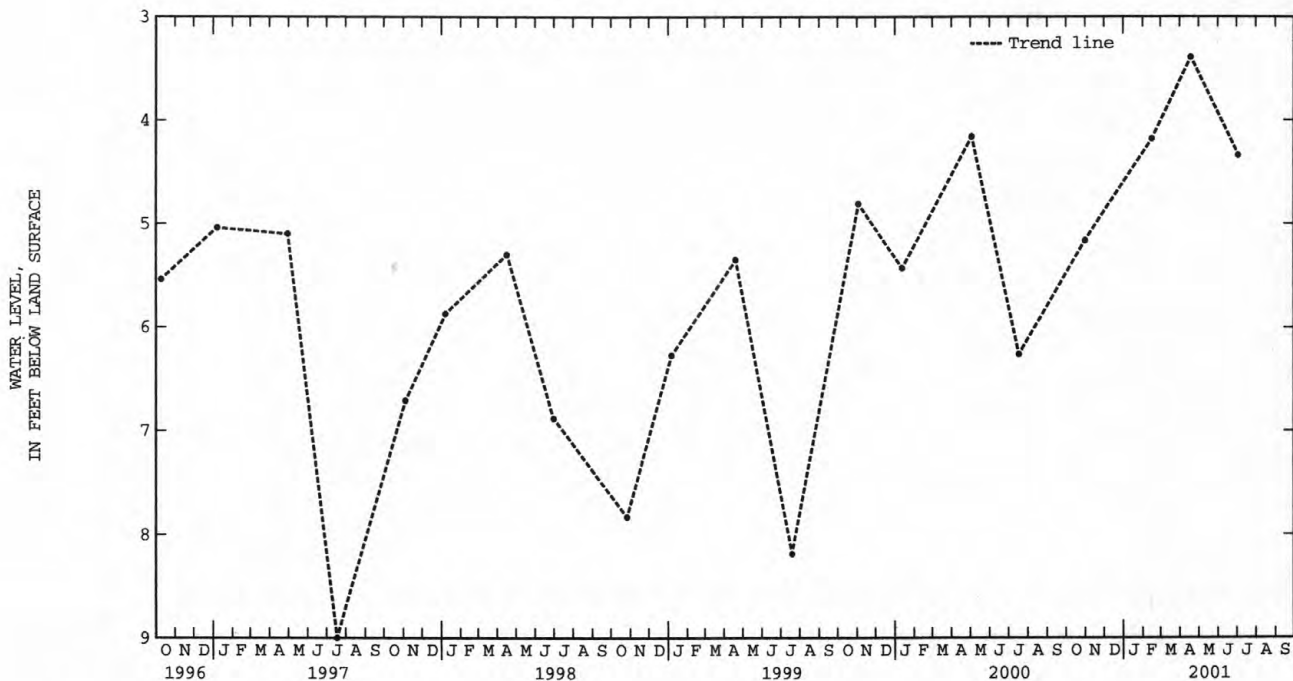
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division.

**PERIOD OF RECORD.**--September 1990 to current year. Unpublished records available in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 3.39 ft below land-surface datum, Apr. 18, 2001; lowest measured, 9.11 ft below land-surface datum, May 4, 1995.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31	5.16	FEB 15	4.18	APR 18	3.39	JUL 03	4.34
WATER YEAR 2001		HIGHEST	3.39	APR 18, 2001	LOWEST	5.16	OCT 31, 2000



## GROUND-WATER LEVELS

301

## YORK COUNTY

371053076252203. Local number, 59F 96 SOW 189B.

**LOCATION.**--Lat 37°10'54", long 76°25'21", NAD83, Hydrologic Unit 02080108, 500 ft north of State Highway 617, 0.6 mi northeast of intersection of State Highways 620 and 617, and 1.3 mi northeast of Dare. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Columbia aquifer of Quaternary age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4.5 in., depth 15 ft, screened 5 to 15 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sep. 4, 1991, to Jul. 7, 1995, bimonthly measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to Sep. 4, 1991, occasional measurement with chalked tape by USGS and Virginia Department of Environmental Quality - Water Division personnel.

**DATUM.**--Elevation of land-surface datum is 4.77 ft above sea level. Measuring point: Top of casing, 1.6 ft above land-surface datum.

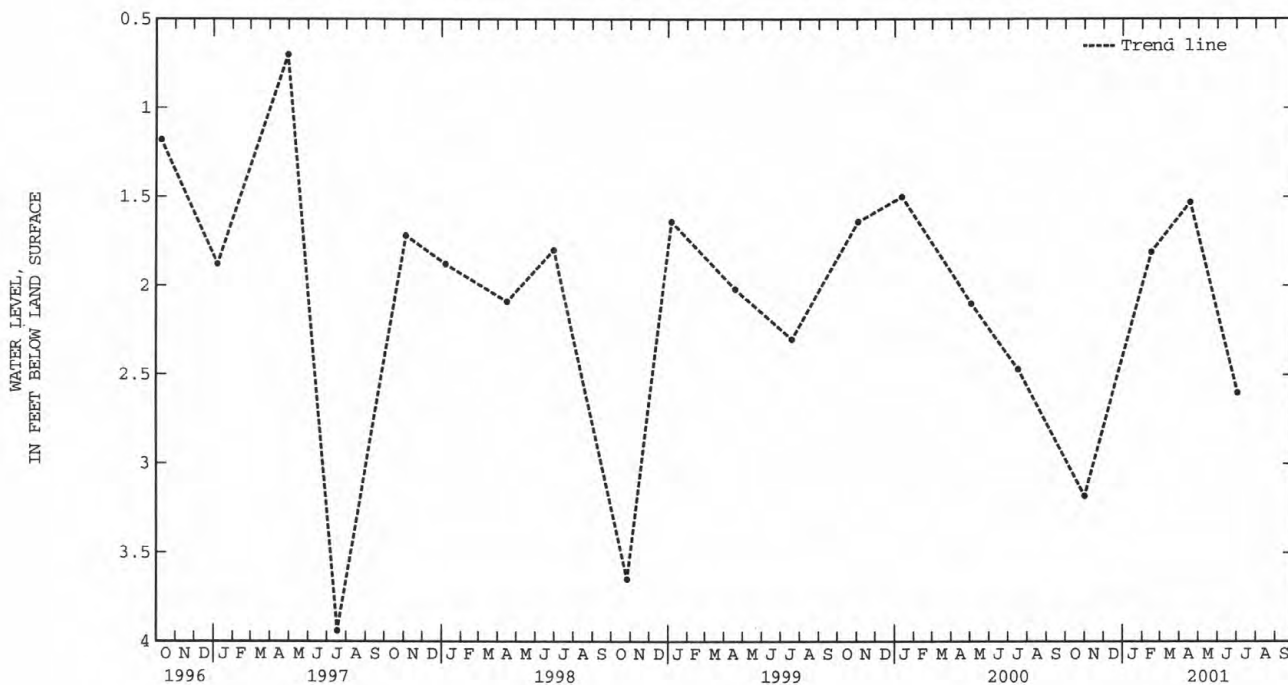
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division.

**PERIOD OF RECORD.**--September 1990 to current year. Unpublished records available in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 0.70 ft below land-surface datum, Apr. 29, 1997; lowest measured, 4.68 ft below land-surface datum, Jun. 11, 1991.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31	3.18	FEB 15	1.81	APR 18	1.53	JUL 03	2.60
WATER YEAR 2001		HIGHEST	1.53	APR 18, 2001	LOWEST	3.18	OCT 31, 2000



## GROUND-WATER LEVELS

## YORK COUNTY

371314076252203. Local number, 59F 99 SOW 190B.

**LOCATION.**--Lat 37°13'14", long 76°25'24", NAD83, Hydrologic Unit 02080107, 50 ft north of State Highway 629, 0.8 mi northeast of intersection of State Highways 173 and 629, and 1.8 mi north of Seaford. Owner: Virginia Department of Environmental Quality.

**AQUIFER.**--Columbia aquifer of Quaternary age.

**WELL CHARACTERISTICS.**--Drilled observation water well, diameter 4.5 in., depth 15 ft, screened 5 to 15 ft.

**INSTRUMENTATION.**--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sep. 4, 1991, to Jul. 7, 1995, bimonthly measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to Sep. 4, 1991, occasional measurement with chalked tape by USGS and Virginia Department of Environmental Quality - Water Division personnel.

**DATUM.**--Elevation of land-surface datum is 3.49 ft above sea level. Measuring point: Top of casing, 1.5 ft above land-surface datum.

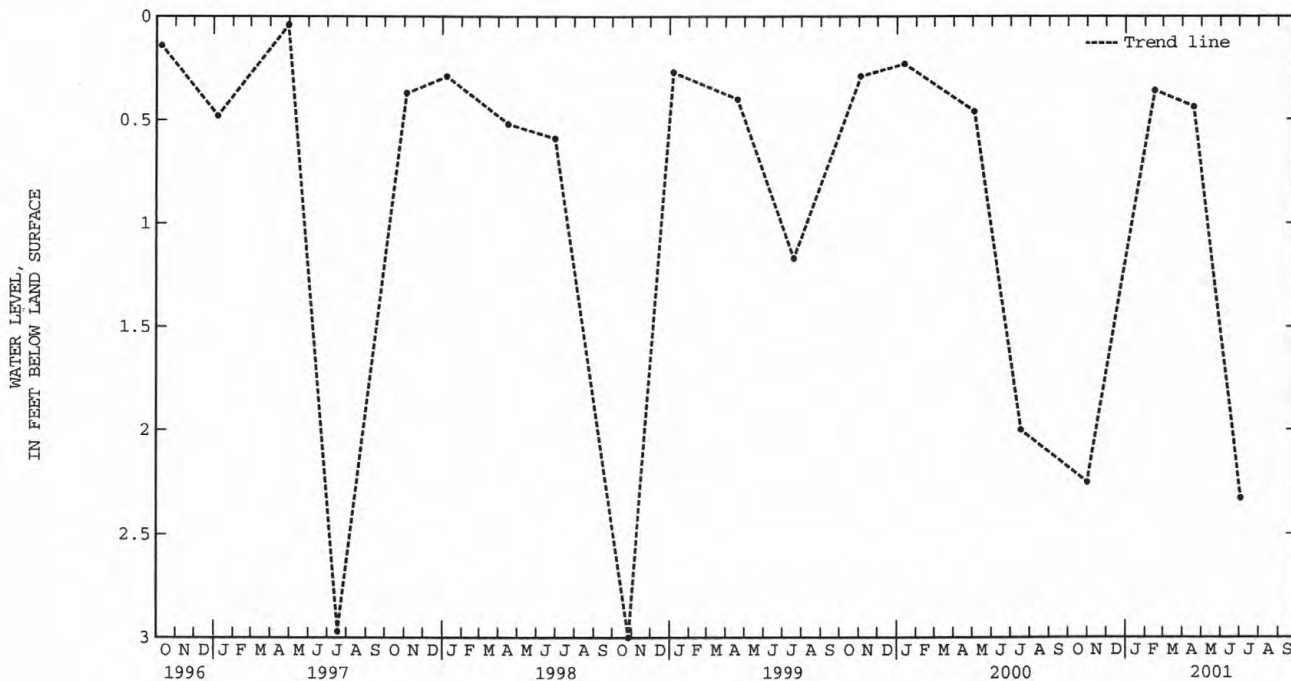
**REMARKS.**--Records provided by the Virginia Department of Environmental Quality - Water Division. Water from this well is known to contain concentrations of dissolved solids greater than 1,000 mg/L.

**PERIOD OF RECORD.**--September 1990 to current year. Unpublished records available in files of the Virginia Department of Environmental Quality - Water Division.

**EXTREMES FOR PERIOD OF RECORD.**--Highest water level measured, 0.04 ft below land-surface datum, Apr. 29, 1997, Feb. 15, 1994; lowest measured, 3.62 ft below land-surface datum, Jun. 11, 1991, Aug. 18, 1993.

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31	2.25	FEB 15	.36	APR 18	.44	JUL 03	2.33
WATER YEAR 2001		HIGHEST	.36	FEB 15, 2001		LOWEST	2.33 JUL 03, 2001





## GROUND-WATER-QUALITY RECORDS

The following remark codes may appear with the water-quality data in this section:

PRINTED OUTPUT	REMARK
E	Estimated value.
M	Constituent was detected but not quantified.
>	Actual value is known to be greater than the value shown.
<	Actual value is known to be less than the value shown.
K	Results based on colony count outside the acceptance range (non-ideal colony count).
L	Biological organism count less than 0.5 percent (organism may be observed rather than counted).
D	Biological organism count equal to or greater than 15 percent (dominant).
&	Biological organism estimated as dominant.
M	Constituent was detected but not quantified.

The following geologic unit codes or aquifer codes may appear with the water-quality data in this section:

CODE	GEOLOGIC UNIT/AQUIFER
000MMPS	METAMORPHOSED SEDIMENTARY ROCKS
000MPVS	METAMORPHOSED VOLCANIC AND SEDIMENTARY ROCKS
110QRNR	COLUMBIA AQUIFER
121CSPKU	YORKTOWN-EASTOVER AQUIFER
124EOCN	CHICKAHOMINY-PINEY POINT AQUIFER
125PLCN	AQUIA AQUIFER
211CRCSU	UPPER POTOMAC AQUIFER
217PPSC	MIDDLE POTOMAC AQUIFER
217PTXN	LOWER POTOMAC AQUIFER
231BLBF	BALLS BLUFF FORMATION
231MNSS	MANASSAS FORMATION
231VINT	VINTA FORMATION
231NWRK	NEWARK GROUP
324NRTN	NORTON FORMATION
324WISE	WISE FORMATION
327LEE	LEE FORMATION
330MSSP	MISSISSIPPIAN SYSTEM
331BLFD	BLUEFIELD FORMATION
340HRVL	HUNTERVILLE CHERT
341BRLR	BRALLIER FORMATION
341CMNG	CHEMUNG FORMATION
341MLBR	MILLBORO SHALE
347DVSL	DEVONIAN-SILURIAN SYSTEMS
361MRBG	MARTINSBURG SHALE
364EGLS	EGGLESTON FORMATION
364MCSN	MOCCASIN FORMATION
371ELBK	ELBROOK FORMATION
377ROME	ROME FORMATION
377SHDY	SHADY FORMATION
400GRGS	GRANITE GNEISS
400PCMB	PRECAMBRIAN ERATHEM

## QUALITY OF GROUND WATER

## DATA LISTED BY COUNTY

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

		LOCAL IDENT- I- FIER	STATION	NUMBER	GEO- LOGIC UNIT	DATE	TIME	SAMPLE TYPE	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) (72019)	DEPTH TO BOT- TOM OF SAMPLE INTER- VAL (FT) (72016)
CAROLINE COUNTY												
50M	2		385814077321401	400PCMB	03-14-01	1300		ENVIRONMENTAL	USGS	USGS	12.67	40
50M	3		385814077321402	121CSPKU	03-14-01	1325		ENVIRONMENTAL	USGS	USGS	10.68	25
50M	4		385812077321801	400PCMB	12-05-00	1600		ENVIRONMENTAL	USGS	USGS	10.75	15
				400PCMB	03-14-01	1700		ENVIRONMENTAL	USGS	USGS	10.46	15
				400PCMB	06-13-01	1630		ENVIRONMENTAL	USGS	USGS	7.28	15
50M	5		385809077322001	400PCMB	03-14-01	1505		ENVIRONMENTAL	USGS	USGS	3.49	8.6
50M	6		385809077322002	110QRNR	03-14-01	1525		ENVIRONMENTAL	USGS	USGS	1.42	4.8
50M	7		385806077322501	400PCMB	03-14-01	0850		ENVIRONMENTAL	USGS	USGS	25.58	46
50M	8		375908077314801	121CSPKU	12-06-00	0935		ENVIRONMENTAL	USGS	USGS	.68	8.3
				121CSPKU	12-06-00	0940		REPLICATE	USGS	USGS	.68	8.3
				121CSPKU	03-15-01	1125		ENVIRONMENTAL	USGS	USGS	.66	8.3
50M	9		375904077315401	121CSPKU	06-13-01	1330		ENVIRONMENTAL	USGS	USGS	.39	8.3
				400PCMB	12-06-00	1010		ENVIRONMENTAL	USGS	USGS	3.64	10
				400PCMB	03-15-01	1155		ENVIRONMENTAL	USGS	USGS	3.32	10
				400PCMB	06-13-01	1400		ENVIRONMENTAL	USGS	USGS	3.38	10
50M	10		375904077315402	121CSPKU	03-15-01	1205		ENVIRONMENTAL	USGS	USGS	3.73	7.6
50M	11		375853077315901	400PCMB	03-15-01	1005		ENVIRONMENTAL	USGS	USGS	.27	42
50M	12		375853077315902	121CSPKU	03-15-01	1025		ENVIRONMENTAL	USGS	USGS	.01	15
50M	13		375853077315903	121CSPKU	03-15-01	1010		BLANK	USGS	USGS	--	--
				121CSPKU	03-15-01	1050		ENVIRONMENTAL	USGS	USGS	1.49	10
50M	14		375842077321301	400PCMB	12-06-00	1105		ENVIRONMENTAL	USGS	USGS	15.59	47
				400PCMB	03-15-01	0855		ENVIRONMENTAL	USGS	USGS	10.17	47
				400PCMB	03-15-01	0900		REPLICATE	USGS	USGS	10.17	47
				400PCMB	06-13-01	1445		ENVIRONMENTAL	USGS	USGS	8.01	47
				400PCMB	06-13-01	1455		REPLICATE	USGS	USGS	8.01	47
50M	15		375842077321302	121CSPKU	12-06-00	1120		ENVIRONMENTAL	USGS	USGS	15.54	27
				121CSPKU	03-15-01	0915		ENVIRONMENTAL	USGS	USGS	10.03	27
				121CSPKU	06-13-01	1455		ENVIRONMENTAL	USGS	USGS	7.82	27
50M	16		385814077321403	121CSPKU	03-14-01	1350		ENVIRONMENTAL	USGS	USGS	8.72	16
50M	17		385814077321404	121CSPKU	03-14-01	1405		ENVIRONMENTAL	USGS	USGS	8.47	10
50M	21		375810077321901	400PCMB	03-14-01	1550		ENVIRONMENTAL	USGS	USGS	6.60	9.9
50M	22		375810077321902	400PCMB	03-14-01	1610		ENVIRONMENTAL	USGS	USGS	4.63	7.4
50M	25		375808077322001	110QRNR	12-05-00	1350		ENVIRONMENTAL	USGS	USGS	.67	3.4
				110QRNR	03-14-01	1025		ENVIRONMENTAL	USGS	USGS	.32	3.4
				110QRNR	09-10-01	1035		ENVIRONMENTAL	USGS	USGS	2.21	3.4
50M	26		375807077322101	400PCMB	12-05-00	1520		ENVIRONMENTAL	USGS	USGS	3.40	8.9
				400PCMB	03-14-01	1000		ENVIRONMENTAL	USGS	USGS	2.96	8.9
				400PCMB	06-13-01	1740		ENVIRONMENTAL	USGS	USGS	3.57	8.9
				400PCMB	09-10-01	1010		ENVIRONMENTAL	USGS	USGS	4.90	8.9
				400PCMB	09-10-01	1012		REPLICATE	USGS	USGS	4.90	8.9
50M	27		375806077322301	400PCMB	03-14-01	0930		ENVIRONMENTAL	USGS	USGS	22.78	25
				400PCMB	06-13-01	1715		ENVIRONMENTAL	USGS	USGS	22.60	25
50M	29		375808077321901	400PCMB	12-05-00	1430		ENVIRONMENTAL	USGS	USGS	2.85	7.0
				400PCMB	03-14-01	1120		ENVIRONMENTAL	USGS	USGS	2.61	7.0
				400PCMB	06-13-01	1805		ENVIRONMENTAL	USGS	USGS	2.83	7.0
50M	30		375808077321902	400PCMB	09-10-01	1115		ENVIRONMENTAL	USGS	USGS	3.44	7.0
				110QRNR	12-05-00	1445		ENVIRONMENTAL	USGS	USGS	2.85	3.4
				110QRNR	03-14-01	1100		ENVIRONMENTAL	USGS	USGS	1.72	3.4
				110QRNR	06-13-01	1815		ENVIRONMENTAL	USGS	USGS	2.72	3.4
50MS001			375807077322201	121CSPKU	03-14-01	1145		ENVIRONMENTAL	USGS	USGS	--	--
50MS002			375810077320901	121CSPKU	03-14-01	1630		ENVIRONMENTAL	USGS	USGS	--	--
51M	17		385819077254501	121CSPKU	12-05-00	1200		ENVIRONMENTAL	USGS	USGS	11.32	14
				121CSPKU	03-13-01	1325		REPLICATE	USGS	USGS	10.75	14
				121CSPKU	03-13-01	1330		ENVIRONMENTAL	USGS	USGS	10.75	14
				121CSPKU	06-13-01	1120		REPLICATE	USGS	USGS	10.38	14
				121CSPKU	06-13-01	1125		ENVIRONMENTAL	USGS	USGS	10.38	14
				121CSPKU	09-13-01	1245		ENVIRONMENTAL	USGS	USGS	11.54	14
51M	15		385832077253501	121CSPKU	12-05-00	1110		ENVIRONMENTAL	USGS	USGS	22.50	25
				121CSPKU	12-05-00	1115		REPLICATE	USGS	USGS	22.50	25
				121CSPKU	03-13-01	1235		ENVIRONMENTAL	USGS	USGS	21.48	25
				121CSPKU	06-13-01	1035		ENVIRONMENTAL	USGS	USGS	19.89	25
				121CSPKU	09-13-01	1205		ENVIRONMENTAL	USGS	USGS	21.25	25
51M	19		385811077254902	110QRNR	03-13-01	1420		ENVIRONMENTAL	USGS	USGS	7.04	9.8
51M	20		385759077254501	121CSPKU	12-05-00	0925		ENVIRONMENTAL	USGS	USGS	10.06	15
				121CSPKU	03-13-01	1030		ENVIRONMENTAL	USGS	USGS	8.80	15

QUALITY OF GROUND WATER

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DATA LISTED BY COUNTY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

LOCAL IDENT- IFIER	DATE	DEPTH TO TOP OF SAMPLE INTER- VAL (FT) (72015)	DEPTH OF WELL, TOTAL (FEET) (72008)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)
CAROLINE COUNTY											
50M 2	03-14-01	35	39.94	250	748	5.6	56	4.9	57	14.4	15.2
50M 3	03-14-01	20	25.14	250	748	9.5	92	5.1	39	14.4	13.9
50M 4	12-05-00	10	15.49	235	752	7.0	70.7	5.1	55	8.5	15.5
	03-14-01	10	15.49	235	748	7.6	69	5.2	54	16.0	11.0
	06-13-01	10	15.49	235	747	7.7	73.8	5.2	56	33.1	12.4
50M 5	03-14-01	8.4	8.62	210	748	1.3	11	4.7	37	20.4	9.4
50M 6	03-14-01	0	4.84	210	748	.3	2	5.0	32	16.6	7.4
50M 7	03-14-01	41	46.28	240	748	2.0	19	5.7	78	12.1	14.6
50M 8	12-06-00	6.0	8.5	200	760	.1	1.1	6.3	474	-2.5	11.6
	12-06-00	6.0	8.5	200	760	.1	1.1	6.3	474	-2.5	11.6
	03-15-01	6.0	8.5	200	750	.1	0	6.3	458	8.8	8.0
	06-13-01	6.0	8.5	200	749	.1	1.6	6.1	589	33.9	17.1
50M 9	12-06-00	9.2	10.35	215	759	M	.4	6.6	316	.5	14.0
	03-15-01	9.2	10.35	215	750	.1	0	6.7	320	8.8	11.1
	06-13-01	9.2	10.35	215	749	0	0	6.4	320	32.4	15.0
50M 10	03-15-01	5.6	7.90	215	750	M	0	6.6	267	8.8	10.9
50M 11	03-15-01	37	41.8	240	750	4.3	43	6.2	63	7.2	14.6
50M 12	03-15-01	13	15.4	240	750	6.3	58	5.5	20	9.1	12.3
50M 13	03-15-01	--	10.2	240	--	--	--	--	--	--	--
	03-15-01	8.0	10.2	240	750	3.8	33	5.3	17	9.1	9.7
50M 14	12-06-00	42	47.5	265	757	7.7	75.4	6.0	38	.5	14.3
	03-15-01	42	47.5	265	750	7.1	69	6.0	33	9.1	14.4
	03-15-01	42	47.5	265	750	7.1	69	6.0	33	9.1	14.4
	06-13-01	42	47.5	265	747	7.9	74.6	5.3	34	33.6	12.0
	06-13-01	42	47.5	265	747	7.9	74.6	5.3	34	33.6	12.0
50M 15	12-06-00	25	27.0	265	757	8.0	79.8	5.0	24	.5	15.1
	03-15-01	25	27.0	265	750	7.5	75	5.1	24	9.1	14.9
	06-13-01	25	27.0	265	747	8.4	83.1	4.3	24	33.6	14.0
50M 16	03-14-01	11	16.2	250	747	10.4	95	5.1	52	12.0	11.4
50M 17	03-14-01	4.7	10.5	250	747	10.6	94	5.1	53	12.0	9.9
50M 21	03-14-01	7.9	10.1	220	748	3.0	26	5.2	37	17.5	9.9
50M 22	03-14-01	5.4	7.6	220	748	2.4	20	5.1	30	17.5	8.5
50M 25	12-05-00	1.4	3.6	210	753	6.2	55.9	5.6	68	8.5	10.1
	03-14-01	1.4	3.6	210	750	5.8	48	5.5	72	11.5	7.7
	09-10-01	1.4	3.6	210	755	3.1	33.5	4.8	73	25.8	18.5
50M 26	12-05-00	6.9	9.1	215	752	6.2	60.7	5.2	80	9.6	13.5
	03-14-01	6.9	9.1	215	750	5.7	50	5.5	72	11.9	9.5
	06-13-01	6.9	9.1	215	748	6.0	57.5	4.5	75	26.8	12.4
	09-10-01	6.9	9.1	215	755	6.8	68.5	5.4	86	25.8	15.3
	09-10-01	6.9	9.1	215	755	6.8	68.5	5.4	86	25.8	15.3
50M 27	03-14-01	20	24.8	240	748	4.7	44	5.5	101	16.4	14.1
	06-13-01	20	24.8	240	748	8.1	79.4	5.8	113	28.5	13.7
50M 29	12-05-00	5.4	7.0	210	752	1.8	17.6	5.6	87	7.5	12.8
	03-14-01	5.4	7.0	210	748	1.6	14	5.3	74	15.2	8.1
	06-13-01	5.4	7.0	210	747	1.3	12.4	5.7	79	28.5	13.5
	09-10-01	5.4	7.0	210	755	1.0	10.8	4.5	84	26.9	17.2
50M 30	12-05-00	2.1	3.4	210	752	6.2	56.9	5.9	127	7.5	10.6
	03-14-01	2.1	3.4	210	749	1.5	12	5.7	104	15.2	7.4
	06-13-01	2.1	3.4	210	747	1.8	17.7	--	82	28.5	15.0
50MS001	03-14-01	--	--	220	749	--	--	5.5	52	11.9	13.0
50MS002	03-14-01	--	--	220	748	--	--	5.2	60	17.2	8.0
51M 17	12-05-00	9.0	13.98	130	756	1.1	10.7	5.6	66	9.3	15.1
	03-13-01	9.0	13.98	130	742	2.2	19	4.9	100	16.3	9.7
	03-13-01	9.0	13.98	130	742	2.2	19	4.9	100	16.3	9.7
	06-13-01	9.0	13.98	130	749	1.9	17.8	5.4	114	33.6	12.8
	06-13-01	9.0	13.98	130	749	1.9	17.8	5.4	114	33.6	12.8
	09-13-01	9.0	13.98	130	755	1.1	11.8	5.4	107	22.6	16.2
51M 15	12-05-00	20	25.29	190	757	8.3	84.6	4.9	190	12.6	15.9
	12-05-00	20	25.29	190	757	8.3	84.6	4.9	190	12.6	15.9
	03-13-01	20	25.29	190	741	9.0	86	4.7	144	15.1	13.7
	06-13-01	20	25.29	190	750	9.6	92.6	4.1	124	34.8	12.9
	09-13-01	20	25.29	190	755	8.2	82.2	4.2	155	25.4	14.8
51M 19	03-13-01	4.8	9.80	110	741	7.8	67	5.5	46	16.2	8.9
51M 20	12-05-00	9.9	14.89	115	758	2.4	25.1	5.0	218	5.0	16.4
	03-13-01	9.9	14.89	115	744	4.7	42	4.7	201	15.6	10.8

## QUALITY OF GROUND WATER

## DATA LISTED BY COUNTY--Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

LOCAL IDENT- I- FIER	DATE	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC DIS- (MG/L AS N) (00623)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	COUNTY	DATA BASE NUMBER
CAROLINE COUNTY									
50M 2	03-14-01	.005	.94	.300	<.001	.006	E.004	033	01
50M 3	03-14-01	.002	E.07	2.52	<.001	<.006	<.007	033	01
50M 4	12-05-00	<.002	<.10	3.60	<.001	E.004	<.007	033	01
	03-14-01	<.002	<.10	3.73	<.001	<.006	<.007	033	01
	06-13-01	.002	E.06	3.71	.001	E.003	<.007	033	01
50M 5	03-14-01	.013	<.10	.025	<.001	<.006	<.007	033	01
50M 6	03-14-01	.003	E.06	.016	<.001	<.006	<.007	033	01
50M 7	03-14-01	<.002	<.10	.341	.004	.041	.035	033	01
50M 8	12-06-00	11.5	13	<.005	<.001	.013	<.007	033	01
	12-06-00	11.8	12	<.047	.022	.011	<.007	033	02
	03-15-01	9.55	10	.006	.006	<.006	<.007	033	01
	06-13-01	12.8	13	.010	.073	<.006	.024	033	01
50M 9	12-06-00	1.28	1.3	<.005	.002	E.004	<.007	033	01
	03-15-01	1.19	1.4	<.005	<.001	<.006	<.007	033	01
	06-13-01	1.34	1.5	.006	.011	<.006	.019	033	01
50M 10	03-15-01	1.17	1.4	<.005	.001	<.006	<.007	033	01
50M 11	03-15-01	.012	<.10	.028	<.001	.097	.085	033	01
50M 12	03-15-01	<.002	<.10	.114	<.001	<.006	<.007	033	01
50M 13	03-15-01	<.002	<.10	.005	<.001	<.006	<.007	033	02
	03-15-01	<.002	.14	.084	<.001	<.006	<.007	033	01
50M 14	12-06-00	<.002	<.10	.303	.001	E.003	<.007	033	01
	03-15-01	<.002	<.10	.261	<.001	<.006	<.007	033	01
	03-15-01	<.002	<.10	.261	<.001	<.006	<.007	033	02
	06-13-01	.002	<.10	.255	<.001	<.006	<.007	033	01
	06-13-01	<.002	<.10	.245	.001	<.006	<.007	033	02
50M 15	12-06-00	.002	<.10	.878	.001	<.006	<.007	033	01
	03-15-01	<.002	1.3	.801	<.001	<.006	<.007	033	01
	06-13-01	.005	E.05	.763	.002	<.006	<.007	033	01
50M 16	03-14-01	<.002	<.10	3.73	<.001	<.006	<.007	033	01
50M 17	03-14-01	.003	<.10	3.65	<.001	<.006	.016	033	01
50M 21	03-14-01	.007	<.10	.018	.001	<.006	<.007	033	01
50M 22	03-14-01	.005	<.10	.008	<.001	<.006	<.007	033	01
50M 25	12-05-00	.012	<.10	3.35	.001	E.003	<.007	033	01
	03-14-01	.022	E.05	3.55	<.001	<.006	<.007	033	01
	09-10-01	.150	.25	3.09	.002	<.006	<.007	033	01
50M 26	12-05-00	.002	<.10	4.55	<.001	E.003	<.007	033	01
	03-14-01	<.002	<.10	3.78	<.001	<.006	<.007	033	01
	06-13-01	<.002	<.10	4.12	<.001	<.006	<.007	033	01
	09-10-01	.005	<.10	5.12	.001	<.006	<.007	033	01
	09-10-01	.003	E.06	4.88	.001	<.006	E.004	033	02
50M 27	03-14-01	.009	<.10	6.22	.002	<.006	<.007	033	01
	06-13-01	.013	.13	7.14	<.001	E.004	<.007	033	01
50M 29	12-05-00	.015	E.07	1.13	.002	E.003	<.007	033	01
	03-14-01	.005	<.10	1.10	<.001	<.006	<.007	033	01
	06-13-01	.009	.12	1.12	.002	<.006	<.007	033	01
	09-10-01	.007	<.10	1.50	.001	<.006	<.007	033	01
50M 30	12-05-00	.004	E.05	.141	.001	E.004	<.007	033	01
	03-14-01	.010	.14	.009	<.001	<.006	<.007	033	01
	06-13-01	.056	.45	.014	.003	.007	E.004	033	01
50MS001	03-14-01	.013	.32	.057	.002	.009	<.007	033	01
50MS002	03-14-01	.003	E.06	.723	<.001	<.006	<.007	033	01
51M 17	12-05-00	.068	.11	<.047	<.001	.035	.033	033	01
	03-13-01	.005	<.10	2.85	<.001	<.006	<.007	033	02
	03-13-01	.008	E.05	2.79	.001	<.006	<.007	033	01
	06-13-01	.054	.16	2.33	.004	.007	E.004	033	02
	06-13-01	.057	.17	2.30	.005	.006	E.004	033	01
	09-13-01	.154	.24	<.050	.001	.079	.070	033	01
51M 15	12-05-00	.018	E.07	13.3	.001	<.006	<.007	033	01
	12-05-00	.009	E.06	12.8	.001	<.006	<.007	033	02
	03-13-01	.008	E.05	6.42	.001	E.003	<.007	033	01
	06-13-01	<.002	<.10	5.46	<.001	<.006	<.007	033	01
	09-13-01	.002	E.05	6.54	.001	<.006	.008	033	01
51M 19	03-13-01	.004	<.10	.029	<.001	<.006	<.007	033	01
51M 20	12-05-00	.006	E.06	4.83	.001	<.006	<.007	033	01
	03-13-01	.007	<.10	6.80	<.001	<.006	<.007	033	01

QUALITY OF GROUND WATER

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DATA LISTED BY COUNTY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

LOCAL IDENT- I- FIER	STATION	NUMBER	GEO- LOGIC UNIT	DATE	TIME	SAMPLE TYPE	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	FLOW RATE (G/M) (00059)	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) (72019)
CAROLINE COUNTY										
51M 20	385759077254501	121CSPKU	09-13-01	1510	ENVIRONMENTAL	USGS	USGS	--		9.96
51M 21	385748077255801	121CSPKU	03-13-01	0940	ENVIRONMENTAL	USGS	USGS	--		12.94
		121CSPKU	09-13-01	1350	ENVIRONMENTAL	USGS	USGS	--		14.62
51M 22	375729077254301	121CSPKU	12-05-00	1000	ENVIRONMENTAL	USGS	USGS	--		8.50
		121CSPKU	03-13-01	1105	ENVIRONMENTAL	USGS	USGS	--		7.40
		121CSPKU	06-12-01	1340	ENVIRONMENTAL	USGS	USGS	--		6.54
51M 23	375729077254302	121CSPKU	09-10-01	1440	ENVIRONMENTAL	USGS	USGS	--		8.39
		121CSPKU	12-05-00	1015	ENVIRONMENTAL	USGS	USGS	--		8.34
		121CSPKU	03-13-01	1120	ENVIRONMENTAL	USGS	USGS	--		7.16
		121CSPKU	06-12-01	1350	ENVIRONMENTAL	USGS	USGS	--		6.35
51M 24	375729077254303	121CSPKU	09-10-01	1500	ENVIRONMENTAL	USGS	USGS	--		8.21
		121CSPKU	03-13-01	1130	ENVIRONMENTAL	USGS	USGS	--		7.08
51M25	375803077253601	121CSPKU	06-12-01	1405	ENVIRONMENTAL	USGS	USGS	--		6.28
		121CSPKU	06-12-01	1435	ENVIRONMENTAL	USGS	USGS	--		1.19
		121CSPKU	09-10-01	1405	ENVIRONMENTAL	USGS	USGS	--		2.09
51M26	375803077253602	121CSPKU	06-12-01	1445	ENVIRONMENTAL	USGS	USGS	--		1.15
		121CSPKU	09-13-01	1440	ENVIRONMENTAL	USGS	USGS	--		1.73
		121CSPKU	09-13-01	1442	REPLICATE	USGS	USGS	--		1.73
51M27	375803077253603	121CSPKU	06-12-01	1455	ENVIRONMENTAL	USGS	USGS	--		1.22
51M28	375845077253701	121CSPKU	06-12-01	1600	ENVIRONMENTAL	USGS	USGS	--		.30
		121CSPKU	09-10-01	1600	ENVIRONMENTAL	USGS	USGS	--		1.11
51M29	375845077253702	121CSPKU	06-13-01	0920	ENVIRONMENTAL	USGS	USGS	--		.65
		121CSPKU	09-13-01	1100	ENVIRONMENTAL	USGS	USGS	--		1.07
51M30	375845077253703	121CSPKU	06-13-01	0930	ENVIRONMENTAL	USGS	USGS	--		.68
		121CSPKU	09-10-01	1615	ENVIRONMENTAL	USGS	USGS	--		.78
GLOUCESTER COUNTY										
58H 10	372619076325201	--	04-26-01	1130	ENVIRONMENTAL	USGS	USGS	1500		142.50
JAMES CITY COUNTY										
56F 52	371454076460701	217PTXN	05-08-01	1345	ENVIRONMENTAL	USGS	USGS	197		129.17
56F 54	371455076460801	217PTXN	07-25-01	1300	ENVIRONMENTAL	USGS	USGS	1460		133.00
56F 55	371454076460801	217PPSC	06-20-01	1400	ENVIRONMENTAL	USGS	USGS	92.0		131.00
57H 10	372309076420501	124EOCN	03-08-01	1430	ENVIRONMENTAL	USGS	USGS	10.0		--
		124eocn	03-08-01	1445	REPLICATE	USGS	USGS	10.0		--
YORK COUNTY										
59F 1 SOW 027	371535076373501	124EOCN	03-09-01	1745	ENVIRONMENTAL	USGS	USGS	12.0		44.68
MATHEWS COUNTY										
59H 6 SOW 193C	372641076235303	--	09-26-01	1620	ENVIRONMENTAL	USGS	USGS	1.6		58.84
59H 7 SOW 193D	372641076235304	--	09-27-01	1100	ENVIRONMENTAL	USGS	USGS	14.0		11.70
59H 8 SOW 193E	372641076235305	--	09-27-01	1400	ENVIRONMENTAL	USGS	USGS	1.3		5.92
CITY OF CHESAPEAKE										
61B 5 SOW 091B	364227076074702	211CRCSU	03-14-01	1730	ENVIRONMENTAL	USGS	USGS	4.0		68.30
61B 15	364227076074709	211CRAQU	03-13-01	1550	ENVIRONMENTAL	USGS	USGS	6.7		.79
CITY OF NORFOLK										
61C 1	365223076122101	211CRCSU	03-15-01	1430	ENVIRONMENTAL	USGS	USGS	12.0		72.10



## QUALITY OF GROUND WATER

## DATA LISTED BY COUNTY--Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

LOCAL IDENT- I- FIER	DATE	DEPTH TO BOT- TOM OF SAMPLE INTER- VAL (FT) (72016)	DEPTH TO TOP OF SAMPLE INTER- VAL (FT) (72015)	DEPTH OF WELL, TOTAL (FEET) (72008)	ELEV. OF LAND SURFACE (FT. ABOVE NGVD) (72000)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	BARO- METRIC PRES- SURE (MM HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT OF SATUR- ATION) (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT OF SATUR- ATION) (MG/L) (00301)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)
CAROLINE COUNTY											
51M 20	09-13-01	15	9.9	14.89	115	--	755	.3	3.6	4.5	298
51M 21	03-13-01	18	13	17.53	185	--	744	5.8	53	4.8	90
	09-13-01	18	13	17.53	185	--	755	2.1	21.4	5.1	171
51M 22	12-05-00	13	11	13.4	110	--	758	6.9	70	4.9	169
	03-13-01	13	11	13.4	110	--	744	8.0	72	4.7	168
	06-12-01	13	11	13.4	110	--	751	7.6	75.5	4.3	165
	09-10-01	13	11	13.4	110	--	755	8.8	94.4	3.9	188
51M 23	12-05-00	11	9.2	11.5	110	--	758	6.6	66.9	4.9	164
	03-13-01	11	9.2	11.5	110	--	744	8.8	79	4.5	183
	06-12-01	11	9.2	11.5	110	--	750	7.9	79.4	4.1	193
	09-10-01	11	9.2	11.5	110	--	755	8.5	91.9	3.8	211
51M 24	03-13-01	7.5	2.7	7.5	110	--	744	9.9	88	4.9	376
	06-12-01	7.5	2.7	7.5	110	--	750	9.0	92.3	4.6	288
51M25	06-12-01	7.9	5.8	8.5	105	--	749	.5	4.5	5.8	229
	09-10-01	7.9	5.8	8.5	105	--	755	M	.4	5.8	180
51M26	06-12-01	4.0	2.4	4.4	105	--	749	.1	.5	6.2	400
	09-13-01	4.0	2.4	4.4	105	--	755	.1	1.5	6.5	668
	09-13-01	4.0	2.4	4.4	105	--	755	.1	1.5	6.5	668
51M27	06-12-01	1.6	.10	2.0	105	--	749	.2	1.9	6.2	433
51M28	06-12-01	13	7.8	13.3	175	--	749	.5	4.9	5.4	205
	09-10-01	13	7.8	13.3	175	--	755	4.0	42.8	4.1	230
51M29	06-13-01	3.9	2.3	4.4	175	--	750	2.2	23.3	5.6	247
	09-13-01	3.9	2.3	4.4	175	--	755	4.0	46.5	6.0	183
51M30	06-13-01	1.8	.20	2.3	175	--	750	1.9	20.6	5.7	232
	09-10-01	1.8	.20	2.3	175	--	755	6.3	72.3	5.3	162
GLOUCESTER COUNTY											
58H 10	04-26-01	1500	850	1527	65.0	2120	760	0	0	7.4	4030
JAMES CITY COUNTY											
56F 52	05-08-01	1250	885	--	--	2600	765	.5	6	7.5	4600
56F 54	07-25-01	1250	810	--	--	2360	757	.3	3.6	7.4	4230
56F 55	06-20-01	720	469	--	--	987	761	.3	4	8.3	1580
57H 10	03-08-01	310	290	312	85.0	214	753	M	.2	8.4	290
	03-08-01	310	290	312	85.0	220	753	M	.2	8.4	290
YORK COUNTY											
59F 1 SOW 027	03-09-01	446	421	446	50.0	2620	752	0	0	8.0	4560
MATHEWS COUNTY											
59H 6 SOW 193C	09-26-01	777	737	--	15.0	3340	758	--	--	7.3	5840
59H 7 SOW 193D	09-27-01	118	88	--	15.0	362	757	.3	3.1	6.9	598
59H 8 SOW 193E	09-27-01	28	8.3	--	15.0	452	757	1.1	11.5	6.5	787
CITY OF CHESAPEAKE											
61B 5 SOW 091B	03-14-01	1060	1040	1060	15.0	2940	753	0	0	7.9	5780
61B 15	03-13-01	769	759	790.00	15.0	4580	744	0	0	7.8	7800
CITY OF NORFOLK											
61C 1	03-15-01	960	900	970	10.8	2550	750	0	0	8.6	4790



## QUALITY OF GROUND WATER

## DATA LISTED BY COUNTY--Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

LOCAL IDENT- I- FIER	DATE	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	CALCIUM DIS- SOLVED (MG/L) AS CA (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L) AS MG (00925)	POTAS- SIUM, DIS- SOLVED (MG/L) AS K (00935)	SODIUM, DIS- SOLVED (MG/L) AS NA (00930)	ALKA- LITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	BROMIDE DIS- SOLVED (MG/L) AS BR (71870)
CAROLINE COUNTY											
51M 20	09-13-01	24.1	18.4	--	--	--	--	--	--	--	--
51M 21	03-13-01	21.5	11.8	--	--	--	--	--	--	--	--
51M 22	09-13-01	26.5	16.4	--	--	--	--	--	--	--	--
	12-05-00	5.2	16.1	--	--	--	--	--	--	--	--
51M 23	03-13-01	20.2	11.0	--	--	--	--	--	--	--	--
	06-12-01	28.5	14.5	--	--	--	--	--	--	--	--
	09-10-01	30.4	18.0	--	--	--	--	--	--	--	--
	12-05-00	9.8	15.7	--	--	--	--	--	--	--	--
	03-13-01	18.4	10.4	--	--	--	--	--	--	--	--
	06-12-01	28.5	15.0	--	--	--	--	--	--	--	--
51M 24	09-10-01	29.2	18.5	--	--	--	--	--	--	--	--
	03-13-01	20.5	9.8	--	--	--	--	--	--	--	--
51M25	06-12-01	28.5	15.8	--	--	--	--	--	--	--	--
	06-12-01	30.2	14.0	--	--	--	--	--	--	--	--
51M26	09-10-01	29.2	19.0	--	--	--	--	--	--	--	--
	06-12-01	30.2	16.0	--	--	--	--	--	--	--	--
51M27	09-13-01	21.2	20.4	--	--	--	--	--	--	--	--
	09-13-01	21.2	20.4	--	--	--	--	--	--	--	--
51M28	06-12-01	29.8	17.3	--	--	--	--	--	--	--	--
51M29	06-12-01	30.5	12.8	--	--	--	--	--	--	--	--
	09-10-01	29.5	17.9	--	--	--	--	--	--	--	--
51M30	06-13-01	29.6	17.7	--	--	--	--	--	--	--	--
	09-13-01	20.1	21.7	--	--	--	--	--	--	--	--
51M30	06-13-01	29.6	18.9	--	--	--	--	--	--	--	--
	09-10-01	29.5	22.0	--	--	--	--	--	--	--	--
GLOUCESTER COUNTY											
58H 10	04-26-01	15.4	25.4	16.4	4.05	9.81	787	305	372	<1	4.67
JAMES CITY COUNTY											
56F 52	05-08-01	23.0	23.6	22.6	4.93	12.4	936	337	411	<1	5.19
56F 54	07-25-01	30.0	23.6	20.0	4.47	12.8	861	346	418	2	4.45
56F 55	06-20-01	31.8	20.4	4.65	1.05	9.78	348	349	413	7	1.00
57H 10	03-08-01	11.2	16.2	7.60	2.06	8.90	52.7	144	164	6	.02
	03-08-01	11.2	16.2	7.49	2.03	9.09	51.8	144	164	6	.02
YORK COUNTY											
59F 1 SOW 027	03-09-01	--	17.7	9.24	10.9	27.9	972	654	797	<1	3.83
MATHEWS COUNTY											
59H 6 SOW 193C	09-26-01	20.4	20.0	26.8	11.5	29.8	1250	1040	1260	3	4.91
59H 7 SOW 193D	09-27-01	19.7	15.4	82.6	8.91	7.09	25.1	285	347	<1	.04
59H 8 SOW 193E	09-27-01	23.8	15.7	117	6.92	2.19	15.9	326	397	<1	.06
CITY OF CHESAPEAKE											
61B 5 SOW 091B	03-14-01	15.7	20.0	16.6	11.0	27.3	1180	455	554	<1	6.12
61B 15	03-13-01	23.4	20.8	19.8	20.4	44.0	1600	636	775	<1	7.82
CITY OF NORFOLK											
61C 1	03-15-01	12.0	21.0	5.86	5.96	25.2	994	528	600	22	4.29

## QUALITY OF GROUND WATER

## DATA LISTED BY COUNTY--Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

LOCAL IDENT- I- FIER	DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)
CAROLINE COUNTY											
51M 20	09-13-01	--	--	--	--	.023	.10	7.33	.030	<.006	<.007
51M 21	03-13-01	--	--	--	--	.010	E.05	.044	.001	<.006	<.007
	09-13-01	--	--	--	--	.227	.30	.780	.001	E.004	<.007
51M 22	12-05-00	--	--	--	--	.015	<.10	5.12	<.001	.007	E.006
	03-13-01	--	--	--	--	.006	E.05	5.83	<.001	E.005	<.007
	06-12-01	--	--	--	--	<.002	E.06	4.67	<.001	E.004	<.007
	09-10-01	--	--	--	--	.220	E.10	6.58	.001	.008	E.006
51M 23	12-05-00	--	--	--	--	.007	E.06	7.21	.001	<.006	<.007
	03-13-01	--	--	--	--	.006	<.10	9.03	<.001	<.006	<.007
	06-12-01	--	--	--	--	.006	E.08	7.37	.003	<.006	.009
	09-10-01	--	--	--	--	.014	E.10	9.75	<.001	<.006	<.007
51M 24	03-13-01	--	--	--	--	.002	E.07	32.5	<.001	<.006	<.007
	06-12-01	--	--	--	--	<.002	E.09	14.1	<.001	E.003	<.007
51M25	06-12-01	--	--	--	--	1.29	2.1	.016	.003	.030	.022
	09-10-01	--	--	--	--	1.52	2.2	.010	.003	.145	.138
51M26	06-12-01	--	--	--	--	1.46	2.7	.066	.067	.013	E.004
	09-13-01	--	--	--	--	.637	3.9	.044	.077	.012	<.007
	09-13-01	--	--	--	--	.533	4.0	.048	.093	.013	<.007
51M27	06-12-01	--	--	--	--	--	2.8	.017	.009	.034	.020
51M28	06-12-01	--	--	--	--	.038	.13	--	.015	E.004	<.007
	09-10-01	--	--	--	--	.006	E.07	15.4	.001	<.006	<.007
51M29	06-13-01	--	--	--	--	.034	.27	--	.032	<.006	<.007
	09-13-01	--	--	--	--	.044	.27	1.15	.001	E.004	<.007
51M30	06-13-01	--	--	--	--	.041	.28	--	.023	<.006	<.007
	09-10-01	--	--	--	--	<.010	.22	2.87	.001	E.004	.011
GLOUCESTER COUNTY											
58H 10	04-26-01	1080	1.4	24.4	67.4	--	--	--	--	--	--
JAMES CITY COUNTY											
56F 52	05-08-01	1230	1.1	25.1	94.1	--	--	--	--	--	--
56F 54	07-25-01	1100	1.1	30.4	84.2	--	--	--	--	--	--
56F 55	06-20-01	308	1.9	31.9	36.8	--	--	--	--	--	--
57H 10	03-08-01	3.2	.7	42.7	9.4	--	--	--	--	--	--
	03-08-01	3.3	.7	42.2	9.4	--	--	--	--	--	--
YORK COUNTY											
59F 1 SOW 027	03-09-01	1050	1.1	28.3	137	--	--	--	--	--	--
MATHEWS COUNTY											
59H 6 SOW 193C	09-26-01	1230	.3	47.8	175	--	--	--	--	--	--
59H 7 SOW 193D	09-27-01	26.7	E.1	34.3	.1	--	--	--	--	--	--
59H 8 SOW 193E	09-27-01	20.8	E.1	34.3	64.3	--	--	--	--	--	--
CITY OF CHESAPEAKE											
61B 5 SOW 091B	03-14-01	1540	1.5	11.8	109	--	--	--	--	--	--
61B 15	03-13-01	2150	1.5	9.9	156	--	--	--	--	--	--
CITY OF NORFOLK											
61C 1	03-15-01	1150	1.6	12.6	119	--	--	--	--	--	--

QUALITY OF GROUND WATER

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DATA LISTED BY COUNTY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

LOCAL IDENT- I- FIER	DATE	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	PUMP OR FLOW PERIOD PRIOR TO SAM- PLING (MIN) (72004)	COUNTY	DATA BASE NUMBER
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51M 20	09-13-01	--	--	--	033	01
51M 21	03-13-01	--	--	--	033	01
	09-13-01	--	--	--	033	01
51M 22	12-05-00	--	--	--	033	01
	03-13-01	--	--	--	033	01
	06-12-01	--	--	--	033	01
	09-10-01	--	--	--	033	01
51M 23	12-05-00	--	--	--	033	01
	03-13-01	--	--	--	033	01
	06-12-01	--	--	--	033	01
	09-10-01	--	--	--	033	01
51M 24	03-13-01	--	--	--	033	01
	06-12-01	--	--	--	033	01
51M25	06-12-01	--	--	--	033	01
	09-10-01	--	--	--	033	01
51M26	06-12-01	--	--	--	033	01
	09-13-01	--	--	--	033	01
	09-13-01	--	--	--	033	02
51M27	06-12-01	--	--	--	033	01
51M28	06-12-01	--	--	--	033	01
	09-10-01	--	--	--	033	01
51M29	06-13-01	--	--	--	033	01
	09-13-01	--	--	--	033	01
51M30	06-13-01	--	--	--	033	01
	09-10-01	--	--	--	033	01
GLOUCESTER COUNTY						
58H 10	04-26-01	130	60.0	4110	073	01
JAMES CITY COUNTY						
56F 52	05-08-01	170	53.0	405	095	01
56F 54	07-25-01	140	70.4	1680	095	01
56F 55	06-20-01	50	6.6	360	095	01
57H 10	03-08-01	<10	<3.2	55	095	01
	03-08-01	10	<3.0	55	095	02
YORK COUNTY						
59F 1 SOW 027	03-09-01	120	8.1	375	199	01
MATHEWS COUNTY						
59H 6 SOW 193C	09-26-01	7140	89.4	835	115	01
59H 7 SOW 193D	09-27-01	730	19.1	60	115	01
59H 8 SOW 193E	09-27-01	21000	295	75	115	01
CITY OF CHESAPEAKE						
61B 5 SOW 091B	03-14-01	480	18.9	495	550	01
61B 15	03-13-01	300	24.3	200	550	01
CITY OF NORFOLK						
61C 1	03-15-01	E30	9.7	328	710	01

## QUALITY OF GROUND WATER

## DATA LISTED BY COUNTY--Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

LOCAL IDENT- I- FIER	STATION	NUMBER	GEO- LOGIC UNIT	DATE	TIME	SAMPLE TYPE	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	FLOW RATE (G/M) (00059)	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) (72019)
CITY OF VIRGINIA BEACH										
61C 43	364558076074501	--	09-18-01	0930	ENVIRONMENTAL	USGS	USGS	1.0	14.55	
61C 44	364558076074401	--	09-17-01	1655	ENVIRONMENTAL	USGS	USGS	9.4	14.99	
61C 45	365212076091201	--	09-13-01	1205	ENVIRONMENTAL	USGS	USGS	8.7	16.06	
61C 46	365212076091202	--	09-13-01	1330	ENVIRONMENTAL	USGS	USGS	9.5	15.16	
62A 22	363714076063501	--	09-11-01	1625	ENVIRONMENTAL	USGS	USGS	7.0	7.10	
62A 23	363714076063502	--	09-11-01	1405	ENVIRONMENTAL	USGS	USGS	1.8	6.86	
		--	09-11-01	1100	BLANK	USGS	USGS	--	--	
62B 15	363812076021201	--	09-18-01	1315	ENVIRONMENTAL	USGS	USGS	1.1	11.57	
62B 16	363812076021202	--	09-17-01	1330	ENVIRONMENTAL	USGS	USGS	8.5	11.11	
62C 32	365046076041601	--	09-13-01	1615	ENVIRONMENTAL	USGS	USGS	8.9	16.66	
		--	09-13-01	1630	REPLICATE	USGS	USGS	8.9	16.66	
62C 33	365046076041602	--	09-14-01	0905	ENVIRONMENTAL	USGS	USGS	8.9	11.00	

## CITY OF WILLIAMSBURG

57G 24 371628076414501 211CRCSU 03-06-01 1200 ENVIRONMENTAL USGS USGS 200 --

LOCAL IDENT- I- FIER	DATE	DEPTH TO BOT- TOM OF SAMPLE INTER- VAL (FT) (72016)	DEPTH TO TOP OF SAMPLE INTER- VAL (FT) (72015)	DEPTH OF WELL, TOTAL (FEET) (72008)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	PH WATER WHOLE (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)
-------------------------------	------	--	---	--	---	---	---	--	---	---	--

## CITY OF VIRGINIA BEACH

61C 43	09-18-01	192	182	197.50	5.7	6560	758	1.6	17.2	7.1	11600
61C 44	09-17-01	102	92	107	5.8	1550	758	.4	3.9	7.3	3020
61C 45	09-13-01	158	138	168	20.4	334	761	0	0	7.4	558
61C 46	09-13-01	72	62	77	20.4	228	761	0	0	7.4	388
62A 22	09-11-01	168	143	178	10.5	1580	759	M	.2	7.5	3050
62A 23	09-11-01	98	88	100	10.4	326	760	0	0	7.3	560
	09-11-01	--	--	100	10.39	176	--	--	--	--	--
62B 15	09-18-01	203	193	208	13.8	5470	758	1.5	16.2	7.6	9910
62B 16	09-17-01	75	65	77	14.0	224	758	M	.3	7.5	294
62C 32	09-13-01	148	138	168	12.7	828	761	0	0	7.8	1670
	09-13-01	148	138	168	12.7	840	761	0	0	7.8	1670
62C 33	09-14-01	80	70	85	12.7	334	758	0	0	7.0	565

## CITY OF WILLIAMSBURG

57G 24 03-06-01 445 410 450 70.0 1000 741 3.5 38.0 8.1 1670

LOCAL IDENT- I- FIER	DATE	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	CALCIUM SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)
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## CITY OF VIRGINIA BEACH

61C 43	09-18-01	20.0	17.9	84.8	153	--	2170	792	960	2	11.8
61C 44	09-17-01	21.6	16.2	34.9	39.4	30.6	465	420	511	<1	2.29
61C 45	09-13-01	22.0	16.4	64.5	6.43	2.62	41.1	191	232	<1	.22
61C 46	09-13-01	22.0	16.6	54.5	5.98	2.78	13.1	182	222	<1	.02
62A 22	09-11-01	--	16.2	43.3	63.7	31.2	467	366	445	1	2.30
62A 23	09-11-01	25.0	17.8	53.7	23.7	15.5	19.6	256	312	<1	.04
	09-11-01	--	--	.85	.133	.13	.6	--	--	--	--
62B 15	09-18-01	18.0	18.3	40.3	90.7	57.2	1870	578	702	1	--
62B 16	09-17-01	--	16.4	49.3	2.72	1.44	11.6	150	182	<1	.01
62C 32	09-13-01	--	16.8	26.8	44.4	32.1	209	297	359	2	1.11
	09-13-01	--	16.8	26.6	44.6	32.1	210	297	359	2	1.04
62C 33	09-14-01	22.0	17.5	55.0	16.4	7.33	30.2	252	307	<1	.10

## CITY OF WILLIAMSBURG

57G 24 03-06-01 2.7 18.4 4.56 1.53 10.6 369 352 429 <1 1.41

## QUALITY OF GROUND WATER

## DATA LISTED BY COUNTY--Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

LOCAL IDENT- I- FIER	DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	PUMP OR FLOW PERIOD PRIOR TO SAM- PLING (MIN) (72004)	COUNTY	DATA BASE NUMBER
CITY OF VIRGINIA BEACH										
61C 43	09-18-01	3340	.4	37.5	185	2800	54.8	50	810	01
61C 44	09-17-01	679	<.2	41.4	.6	4220	124	22	810	01
61C 45	09-13-01	66.0	E.1	35.9	2.3	890	85.2	30	810	01
61C 46	09-13-01	16.9	.2	31.8	E.1	880	55.7	40	810	01
62A 22	09-11-01	703	.3	22.1	56.0	690	E5.8	70	810	01
62A 23	09-11-01	36.2	.3	29.6	1.5	610	7.1	95	810	01
	09-11-01	--	--	E.1	--	<10	<3.0	--	810	02
62B 15	09-18-01	2940	.8	38.9	77.8	1090	32.2	35	810	01
62B 16	09-17-01	10.4	<.2	51.8	3.2	570	188	30	810	01
62C 32	09-13-01	358	<.2	12.6	.2	1340	7.8	45	810	01
	09-13-01	356	<.2	12.5	E.1	1340	8.4	45	810	02
62C 33	09-14-01	37.0	.2	62.2	E.1	5700	190	30	810	01
CITY OF WILLIAMSBURG										
57G 24	03-06-01	333	2.0	16.3	36.6	10	5.9	50	830	01

Remark Codes Used in This report:

< -- Less than  
E -- Estimated value

Null Value Remark Codes Used in This Report:

M -- Presence verified, not quantified

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# CONVERSION FACTORS AND VERTICAL DATUM

Multiply	By	To obtain
<b>Length</b>		
inch (in.)	$2.54 \times 10^1$	millimeter
	$2.54 \times 10^{-2}$	meter
foot (ft)	$3.048 \times 10^{-1}$	meter
mile (mi)	$1.609 \times 10^0$	kilometer
<b>Area</b>		
acre	$4.047 \times 10^3$	square meter
	$4.047 \times 10^{-1}$	square hectometer
	$4.047 \times 10^{-3}$	square kilometer
square mile (mi <sup>2</sup> )	$2.590 \times 10^0$	square kilometer
<b>Volume</b>		
gallon (gal)	$3.785 \times 10^0$	liter
	$3.785 \times 10^0$	cubic decimeter
	$3.785 \times 10^{-3}$	cubic meter
million gallons (Mgal)	$3.785 \times 10^{-3}$	cubic meter
	$3.785 \times 10^{-3}$	cubic hectometer
cubic foot (ft <sup>3</sup> )	$2.832 \times 10^1$	cubic decimeter
	$2.832 \times 10^{-2}$	cubic meter
cubic-foot-per-second day [(ft <sup>3</sup> /s) d]	$2.447 \times 10^3$	cubic meter
	$2.447 \times 10^{-3}$	cubic hectometer
acre-foot (acre-ft)	$1.233 \times 10^3$	cubic meter
	$1.233 \times 10^{-3}$	cubic hectometer
	$1.233 \times 10^{-6}$	cubic kilometer
<b>Flow</b>		
cubic foot per second (ft <sup>3</sup> /s)	$2.832 \times 10^1$	liter per second
	$2.832 \times 10^1$	cubic decimeter per second
	$2.832 \times 10^{-2}$	cubic meter per second
gallon per minute (gal/min)	$6.309 \times 10^{-2}$	liter per second
	$6.309 \times 10^{-2}$	cubic decimeter per second
	$6.309 \times 10^{-5}$	cubic meter per second
million gallons per day (Mgal/d)	$4.381 \times 10^1$	cubic decimeter per second
	$4.381 \times 10^{-2}$	cubic meter per second
<b>Mass</b>		
ton (short)	$9.072 \times 10^{-1}$	megagram or metric ton

*Sea level:* In this report "sea level" refers to the National Geodetic Vertical Datum of 1929 (NGVD of 1929)—a geodetic datum derived from a general adjustment for the first-order level nets of both the United States and Canada, formerly called Sea Level Datum of 1929.

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